351

THE LIBRARY
OF
THE UNIVERSITY
OF CALIFORNIA
LOS ANGELES

Digitized by the Internet Archive
in 2007 with funding from
Microsoft Corporation

http://www.archive.org/details/municipalaccount00egglialа

MUNICIPAL ACCOUNTING

By

DeWITT CARL EGGLESTON, M.E., C.P.A.

Assistant Professor of Cost Accounting and Lecturer on Municipal Accounting, the College of the City of New York; Member of American Institute of Accountants and American Statistical Association

THE RONALD PRESS COMPANY
NEW YORK

Copyright, 1914

BY

THE RONALD PRESS COMPANY

Architecture & Urban Planning Library

HJ
9773
E29m

PREFACE

When we consider the enormous growth of our cities in number and population, and the increasing complexity of their affairs, it is a matter of surprise that municipal accounting has not received greater attention. The subject has been discussed at various meetings of accountants, but the discussions have thrown little light on the methods of keeping a city's books. The annals of the proceedings of associations of comptrollers, statisticians, economists, engineers, and accounting officers furnish little more than suggestions for a system of municipal accounts. Reference to the largest libraries in this country shows that, with the exception of one or two volumes, the literature on municipal accounting and reporting has gone little beyond the pamphlet stage.

The purpose of the present book is to give the best modern practice in municipal accounting. It has been planned to meet the requirements of practising accountants, of accountants engaged in municipal work, and, generally, the needs of all students of accounting who may be in search of a complete method of municipal reporting.

The description of the accounting system for a large city deals in considerable detail with the transactions as they appear in the journal, ledger, and different summarized statements. The numerous forms, entries, accounts, and balance sheets required, are fully explained.

The author has drawn largely on experience gained while in the Department of Finance in the City of New York, to present some of the best features of the system of accounting control now used in that city. Inasmuch as

1612721

more effort has been expended in New York City than in any other city in this country to devise and adapt the system of accounting to the needs of the city, an explanation of the principles involved and the methods pursued should be of help to the accountants of other cities who are struggling with the difficult problems of municipal accounting.

For the most part, the methods described in the present volume are applicable to, and intended for, the larger cities of the country. For the benefit of those interested in the accounting of smaller cities, a special chapter has been added. This gives every journal entry required for the transactions resulting from budgetary, capital, or special charter provisions; shows the accounts to which these are posted; and finally, presents a statement as set up from the balances appearing in the individual ledger accounts.

The author sincerely trusts that the present work will be found adequate, and of real assistance to the accounting profession. He will greatly appreciate any suggestions or criticisms that may tend to improve the volume.

DeWitt Carl Eggleston

October 9, 1914

As the fundamental procedure governing municipal accounting changes but slowly, the best practice in this field is still as explained in these pages; its chief objects continue to be to exercise control over all authorizations for the expenditure of moneys and to keep separate the tax levy, capital, and special trust funds.

The author desires to take this opportunity of thanking the many readers who have expressed their appreciation of this work.

DeWitt Carl Eggleston

Mt. Vernon, New York,
April 11, 1922

CONTENTS

Chapter I.—The Genesis of Modern Municipal Accounting

A Recent Development
Uniform Classification
Budget Reform
Accounting Terminology
The Herman A. Metz Fund
Training for Municipal Accountants
Standard Balance Sheets
General Purchasing Plan Proposed for New York
Accounting for the City of Philadelphia
Progress Toward Uniformity

Chapter II. Keeping a City's Books

Public Requirements
Classification of Bookkeeping Systems
Status of City Bookkeeping
Revenue and Expense Accounts
Controlling Accounts
Complete Information
Standards to be Met

Chapter III. Putting Municipal Accounts on an Income and Expenditure Basis

Equitable Borrowing
Private and Public Business Contrasted
Depreciation Reserves
Municipal Profits
A Penalized Public
An Index of Efficiency
Publicity
Municipal Ownership
Fundamental Requirements of Municipal Government

Chapter IV. Municipal Funds and Their Uses

Necessity for Proper Fund Accounting
Legal Restrictions
Classification of Funds
Bonded Debt

Chapter V. Budget-Making as a Means of Control

Budget-Making
Segregated and Lump Sum Budgets
Estimates of Salaries
Estimates of Wages
Estimates for Hired Teams, Horses, and Carts
Estimates for Supplies, Materials, and Equipment
Service by Contract or Agreement
Lump Sum Estimates
Statistical Exhibit of Departmental Estimates
The Tentative Budget
Approval or Veto of Budget
Modification of the Budget
Accounting Control
Summary

Chapter VI. Bond Fund Authorizations

Funding Relations of a City
Avoiding Overdrafts
Bond Funds
Journal Entries

Chapter VII. Purchase Records

Central Purchasing Department
General Purchasing Agent
Vendor's Index Card
Article Index Card
Standardization
Non-Technical Specifications
Technical Specifications
Proposal for Bids
Bid Sheet
Estimate Box
Samples
Sureties
Delinquent Contractors
Request for Purchase
Classification of Purchases
Manifold Purchase Orders
Vendor's Copy of Purchase Order
Storekeeper's Advice of Goods Ordered
Office Copy of Purchase Order
Register of Contracts
Register of Open Market Orders

Register of Miscellaneous Claims
Register of Obligations Incurred by Condemnation Proceedings
Special Reserve Accounts

Chapter VIII. Voucher Records

Evidence Required for Audit Purposes
Method of Auditing Claims
Procedure Followed
Certificates on Purchase Order
Record of Contract Orders
Record of Open Market Orders
Invoices
Voucher Stamp
Register of Vouchers
Register of Vouchers—Sinking Funds

Chapter IX. Pay-Rolls

Nature of Pay-Rolls
Elective Officers
The Merit System
Budget Restrictions
Employee's Record Card
Record of Clock Numbers
Monthly Clock Card
Daily Time Report
Timekeeper's Record Book
Distribution Time Sheet
Pay-Roll Analysis
Straight Pay-Roll
Split Pay-Roll
Pension Fund Deductions
Pension Fund Pay-Rolls
Rate Table
Recapitulation of Pay-Rolls
Record of Salaries Expended, and Unexpended Balances
Record of Wages Expended Against Budget Schedule Lines
Certifications to Pay-Rolls
Certifications to Pay-Roll Recapitulations

Chapter X. Judgments and Mandamuses

Register of Judgments and Mandamuses
Procedure Followed
Character of Charges

Chapter XI. Cash Payments

The City Treasurer
City Depositories
Voucher Checks
Register of Checks

Chapter XII. Stores Control

Office of Storekeeper
Storehouse Organization
Arrangement of Stores
Storekeeper's Advice of Goods Ordered
Memorandum Invoices
Stores Ledger
Working Desk
Rejected Goods Records
Requisitions on Storekeeper
Requisitions Used by Penal Institutions
Table of Food Allowances
Checking Stores Requisitions
Receipt Vouchers
Stores Due Book
Distribution Sheet of Stores
Distribution Entered on Stores Ledger
Units of Measure
Method for Handling Broken Dozens
Decimal Equivalents of Common Fractions
Pricing Stores
Cuts of Meat
Recapitulation of Stores
Statement of Equipment Condemned
Inventory
Farm and Dairy Products
Prison-Made Bread
Material Used for Repair and Maintenance Work
Register of Stores Requisitions
Accountability

Chapter XIII. Expense Analysis

Functional Expense Accounts
Health Department Organization Chart
Contagious Disease Hospital Organization Chart
Chart of Hospital Accounts
Distinction between Operation and Maintenance
Definitions of Expense Terms

Subclassifications of Supplies
Subclassifications of Equipment
Materials for Repairs
Service by Contract or Agreement
Fixed Charges
Departmental Expense Ledger
Operation of Departmental Expense Ledger
Monthly Statement

Chapter XIV. Municipal Costs

Per Capita Cost Statement
Cost of Kitchen and Dining Room Service
Horse Day Costs
Street Cleaning Costs
Laundry Costs and Production
Motor Vehicle Service Costs
Cost of Inspection Service
Cost of Treatments in Clinics
Light, Heat and Power Costs
Gas Production Costs
Water Department Costs
Cost of Prison-Made Articles
(1) Shoes
(2) Brushes
(3) Bedsteads and Mattresses
(4) Hosiery and Knit Goods
Profits on Prison-Made Goods
Job Costs
Work Orders
Manifold Work Orders
Daily Time Report
Driver's Daily Report
Overhead Expense—Main Office
Cost Summary
Register of Cost Sheets
Cost Analysis
Budget Per Capita Cost Statement
Graphic Form of Budget

Chapter XV. Accounts Receivable

Controlling Accounts
Taxes
Definition of Real Estate
Definition of Personal Property

Property Records
Tax Maps
Net Earnings Rule
Real Estate Record
Personal Property Record
Valuation History Record
Register of Deeds
Annual Record of Assessment Valuations
Exemptions
Corrections in Assessment Valuations
Assessment Rolls
Triplicate Tax Bills
Condensed Billing System
Warrants for Collection
Taxes Receivable
Assessments
Meter Reader's Card
Departmental Charges
Accruals to Funds
Internal Check on Transactions

Chapter XVI. Collections

Tax Receipts
Tax Liens on Real Estate
Personal Property Taxes
Poll Tax Collections
Assessments and Water Rates
Departmental Charges
Register of Collections
Register of Abatements
Revenue from Licenses and Permits
Register of Receipts from Bond Sales
Register of Tailings
Register of Deposits
Record of Daily Bank Balances
Financial Stationery
Angle Rule Dating
Financial Condition

Chapter XVII. Journal Entries

Classification of Municipal Journal Entries

Appropriation Entries

Appropriations Authorized
Contracts Reserve

Contract Orders Uncleared
Open Market Orders Reserve
Miscellaneous Claims Reserve
Vouchers Payable
Pay-Rolls Payable
Judgments and Mandamuses Payable
Cash Paid Entry
Insurance Expiration Entry
Stores Distribution Entry
Burden Distribution Entry
Taxes Receivable
Departmental Accounts Receivable
Accounts Receivable Collections
Cash Collections
Miscellaneous Collections
Revenue Bond Sales
Abatement of Taxes Entry

Special Revenue Bond Fund Entries

Special Revenue Bond Funds Authorized
Sundry Special Revenue Bond Fund Accounts
Cash Sales Entry
Equipment and Sundry Accounts—Closing Entry
Abatement of Expense—Closing Entry
Final Closing Entries

Capital Fund Entries

Construction Funds Authorized
Sundry Capital Fund Accounts
Reserve for Awards—Condemnation Proceedings
Construction Bond Sales Entry
Due to Other Funds; Unapplied Surplus
Capital Surplus Entry
Construction Bonds Liquidated Entry

Sinking Fund Entries

Reserve Required to Meet Bonded Debt and Interest Payments
Sinking Fund Budget Moneys
Sundry Sinking Fund Accounts
Debt and Interest Payments
Accrued Interest and Sinking Fund Requirements
Revenue and Unapplied Surplus
Amortization of Premium Entry
Sinking Fund—Closing Entry

Special and Trust Funds Entries

Special and Trust Funds Authorized
Sundry Special and Trust Fund Accounts
Special Assessments Entry
Assessment Bonds Entry
Special Assessments Collections Entry
Unclaimed Salaries and Wages Entry
Depositors Cash Entry
Private Securities and Properties in Trust Entry
Bequests and Legacies Entry
Closing Entry

Property Accounts

Property Accounts Journal Entry

Chapter XVIII. Illustrative Journal Entries

Chapter XIX. General Ledger Accounts

General Classification of Ledger Accounts

Accounts Set up in the Current Fund Balance Sheet and Supporting Schedules

Budget Requirements
Special Revenue Bond Fund Requirements
Unapplied Surplus
Available Cash Surplus
Appropriations, 1914
Contracts Reserve—Appropriations
Open Market Orders Reserve—Appropriations
Miscellaneous Claims Reserve—Appropriations
Cash
Taxes Receivable
Reserve for Abatement of Taxes, 1914
Departmental Accounts Receivable
Insurance Prepaid
Stores
Vouchers Payable—Appropriations
Pay-Rolls Payable—Appropriations
Judgments and Mandamuses Payable—Appropriations
Revenue Bonds
Sundry Revenue Bond Fund Accounts
Insurance Prepaid Reserve
Stores Reserve
Current Surplus

Revenue—General Government
Abatement of Expense—General Government
Revenue
Interest Received
Expense—General Government
Expense
Interest Paid
Equipment and Tools
Work in Process
Suspense

Accounts Set up in the Capital Fund Balance Sheet

Construction Fund Requirements
Sundry Capital Fund Accounts
Reserve for Awards—Condemnation Proceedings
Construction and Equipment
Real Estate
Due to Other Funds—Special and Trust Funds
Construction Bonds
Construction and Equipment Reserve
Real Estate Reserve
Capital Surplus

Accounts Set up in the Sinking Fund Balance Sheet

Sinking Fund Requirements
Reserve Required to Meet Bonded Debt at Maturity
Reserve Required to Meet Interest on Bonded Debt
Investments—Sinking Fund
Premiums on Sinking Fund Investments
Interest Receivable
Sundry Sinking Fund Accounts
Sinking Fund Surplus

Accounts Set up in the Special and Trust Fund Balance Sheet

Special and Trust Fund Requirements
Sundry Special and Trust Fund Accounts
Special and Trust Fund Authorizations
Securities and Properties in Trust
Due from Construction Funds
Local Improvements
Unclaimed Salaries and Wages
Deposits
Assessment Bonds

Securities and Properties in Trust Reserve
Local Improvements Reserve
Special Accounts Surplus

Accounts Set Up in the Property Account Balance Sheet

Sundry Property Accounts
Depreciation Accounts
Property Account Surplus
Trial Balance

Chapter XX. General Ledger Accounts

Charts and Pro Forma Accounts

Chart of General Ledger Accounts
  Current Fund Accounts
  Capital Fund Accounts
  Sinking Fund Accounts
  Special and Trust Fund Accounts
  Property Accounts
Pro Forma General Ledger Accounts
  Budget Requirements
  Unapplied Surplus
  Available Cash Surplus
  Appropriations, 1914
  Contracts Reserve—Appropriations
  Cash
  Taxes Receivable—Real Estate—1914
  Reserve for Abatement of Taxes, 1914
  Insurance Prepaid
  Vouchers Payable—Appropriations
  Revenue Bonds (Issued in Anticipation of Collection of 1914 Taxes)
  Insurance Prepaid Reserve
  Current Surplus
  Revenue—General Government
  Abatement of Expense—General Government
  Expense—General Government
  Construction and Equipment
  Due to Other Funds—Special and Trust
  Reserve Required to Meet Bonded Debt at Maturity
  Investments—Sinking Fund
  Securities and Properties in Trust

Due from Construction Funds
Unclaimed Salaries and Wages
Land
Depreciation on Construction Reserve

Chapter XXI. Balance Sheets and Supporting Schedules

General Ledger Accounts Classified
Balance Sheets Classified

CURRENT FUND BALANCE SHEET

Part 1—Fund Accounts
(a) Requirements and Surplus
(b) Authorizations and Reserves
Part 2—Proprietary Accounts
(a) Assets
(b) Liabilities
Current Fund Surplus

CAPITAL FUND BALANCE SHEET

Part 1—Fund Accounts
(a) Requirements and Surplus
(b) Authorizations and Reserves
Part 2—Proprietary Accounts
(a) Assets
(b) Liabilities

SINKING FUND BALANCE SHEET

Part 1—Fund Accounts
(a) Requirements and Surplus
(b) Reserves
Part 2—Proprietary Accounts
(a) Cash and Investments
(b) Revenues Receivable
(c) Liabilities

SPECIAL AND TRUST FUND BALANCE SHEET

Part 1—Fund Accounts
Part 2—Proprietary Accounts
(a) Assets
(b) Liabilities

PROPERTY ACCOUNT BALANCE SHEET
CONSOLIDATED BALANCE SHEET

Part 1—Fund Accounts
(a) Requirements and Surplus
(b) Authorizations and Reserves

Part 2—Proprietary Accounts
(a) Assets
(b) Liabilities
Consolidated Surplus Account
Illustrative Balance Sheets

Chapter XXII. Balance Sheets and Supporting Schedules—Forms

Current Fund Surplus
Current Fund Balance Sheet—Fund Accounts
Current Fund Balance Sheet—Proprietary Accounts
Capital Fund Balance Sheet—Fund Accounts
Capital Fund Balance Sheet—Proprietary Accounts
Sinking Fund Balance Sheet—Fund Accounts
Sinking Fund Balance Sheet—Proprietary Accounts
Special and Trust Fund Balance Sheet—Fund Accounts
Special and Trust Fund Balance Sheet—Proprietary Accounts
Consolidated Balance Sheet—Fund Accounts
Consolidated Balance Sheet—Proprietary Accounts
Consolidated Surplus Account
Property Account Balance Sheet

Chapter XXIII. Subsidiary Ledgers

Purpose
The Subsidiary Ledgers Classified
(1) Appropriation Ledger
(2) Bond Fund Ledger
(3) Contract Ledger
(4) Claimants Ledger
(5) Customers Ledger
(6) Departmental Expense Ledger
(7) Stores Ledger
(8) Property Ledger
(9) Equipment Ledger
(10) Live Stock Ledger
(11) Depositors Ledger

Chapter XXIV. Detailed Statements

(1) Comparative Statement of Budget Allowances and Expense Accounts
(2) Statement of the Condition of Appropriations
(3) Statement of the Condition of Bond Funds
(4) Statement of the Condition of Contracts
(5) Statement of Departmental Expense
Unit Cost of Work Done

Inventory of Equipment
Depreciation
Administrative Control

Chapter XXV. A City's Borrowing Capacity

Municipal Borrowing
Purpose of Bond Issues
Limiting the Borrowing Power
"Outside the Debt Limit"
Self-Supporting Activities
Sinking Fund Bonds
Special Revenue Bonds
Revenue Bonds
Sundry Liabilities
Diversion of Funds
Perpetual Care Funds
Debt Limit—Massachusetts Cities
Debt Limit—City of New York
Resumé

Chapter XXVI. Uniform School Accounts

Value of Uniform Accounts
School Property Accounts
Account Number Classifications
Revenues
Expenditures
Combined Cash Book and Journal
Pay-Rolls
Voucher Checks
Petty Cash Voucher
Journal Entries
Ledger Accounts
Financial Statements
Statistical Records

Chapter XXVII. Machine Tabulated Records

Machine-Punched Card
Decimal Codes
Punching the Cards
Sorting Cards
Tabulating Cards
Use for Machine Tabulated Records

Chapter XXVIII. Accounting for Small Cities
Requirements
General Ledger Accounts
  Current Accounts
  Capital Accounts
  Sinking Fund Accounts
  Trust Accounts
Classification of Journal Entries
Illustrative Journal Entries
Ledger, 1914, Current Accounts
  Budget Requirements
  Appropriations, 1914
  Reserve for Current Claims
  Current Vouchers Payable
  Current Pay-Rolls Payable
  Current Cash
  Taxes Receivable, 1914
  Reserve for Abatement of Taxes
  Water Rates Receivable
  Revenue Bonds
  Special Revenue Requirements
  Special Appropriations
  Special Revenue Bonds
  Current Surplus
Ledger, 1914, Capital Accounts
  Capital Cash
  School Bonds
  Capital Surplus
  Construction Requirements
  Construction
  Construction Funds Authorized
  Reserve for Capital Claims
  Capital Vouchers Payable
  Sinking Fund Cash
  Sinking Fund Surplus
  Sewer Bonds
  Local Improvements
  Sewer Assessments
  Street Paving Notes
  Street Paving Assessments
  Special and Trust Funds
  Police Pension Fund Cash
  Police Pension Fund Surplus
Balance Sheet
  Current Accounts

Capital Accounts
Trust Accounts

Chapter XXIX. Graphic Charts

Uses of Graphic Charts
Municipal Accounting System
Accounting System Chart
Budget for 1914, City of New York
Amounts Paid for Personal Service, and Numbers of Employees
Per Capita Cost of New York City Budget
Comparison of Net Funded Debt and Assessed Valuation
Cost of Operating and Maintaining Bridges
Number of Nurses Required in Municipal Hospitals
Trend in Patient Days

Chapter XXX. Charts

EXHIBIT

A. Organization Chart of Health Department
B. Organization Chart of Contagious Disease Hospital
C. Chart of Light, Heat and Power Costs
D. Angle Rule Dating
E. Accounting System Chart
F. Chart of Municipal Accounting System
G. Chart of Comparative Budget Allowances
H. Chart Showing Relative Amounts Paid for Personal Service and Numbers of Employees
I. Chart Showing Per Capita Cost of New York City's Budget
J. Comparison of Net Funded Debt and Assessed Valuation
K. Chart Showing Cost of Operating and Maintaining Bridges
L. Chart Showing Number of Nurses Required in Municipal Hospitals
M. Chart Showing Trend in Patient Days

Chapter XXXI. Forms Relating to Purchases

FORM

1. Vendor's Index Card
2. Article Index Card
3. Request for Purchase
4. Vendor's Copy of Purchase Order
5. Storekeeper's Advice of Goods Ordered
6. Office Copy of Purchase Order
7. Register of Contracts
8. Register of Open Market Orders

FORM
9. Register of Miscellaneous Claims
10. Register of Obligations Incurred by Condemnation Proceedings
11. Record of Contract Orders
12. Record of Open Market Orders

Chapter XXXII. Forms Relating to Disbursements

a. Voucher Forms
13a. Voucher Stamp—General Form
13b. Voucher Stamp—Storekeeper's Form
14. Register of Vouchers—Appropriations
15. Register of Vouchers—Special Revenue Bond Funds
16. Register of Vouchers—Capital Fund
17. Register of Vouchers—Special and Trust Funds
18. Register of Vouchers—Sinking Funds

b. Pay-Roll Forms
19. Employee's Record Card
20. Record of Clock Numbers
21. Monthly Clock Card
22. Daily Time Report
23. Distribution Time Sheet
24. Pay-Roll Analysis
25. Straight Pay-Roll
26. Split Pay-Roll
27. Recapitulation of Pay-Rolls
28. Record of Salaries Expended, and Unexpended Balances
29. Record of Wages Expended Against Budget Schedule Lines

c. Judgments and Mandamuses
30. Register of Judgments and Mandamuses

Chapter XXXIII. Checks and Check Registers

31. Voucher Check
32. Register of Checks—Appropriations
33. Register of Checks—Special Revenue Bond Funds
34. Register of Checks—Capital Fund
35. Register of Checks—Sinking Fund
36. Register of Checks—Special and Trust Funds

Chapter XXXIV. Forms Relating to Stores

37. Stores Ledger
38. Requisition on Storekeeper
39. Requisition on Storekeeper
40. Requisition on Storekeeper

FORM

41. Requisition on Storekeeper
42. Requisition on Storekeeper
43. Distribution Sheet of Stores (Issued to Doctors' Kitchen and Dining Room)
44. Register of Stores Requisitions

Chapter XXXV. Forms Relating to Costs

45. Per Capita Cost Statement
46. Cost of Kitchen and Dining Room Service
47. Laundry Costs and Production
48. Motor Vehicle Daily Report
49. Monthly Summary of Motor Vehicle Service Costs
50. Daily Time Report
51. Cost Summary
52. Register of Cost Sheets

Chapter XXXVI. Forms of Records and Registers

53. Real Estate Record
54. Personal Property Record
55. Valuation History Record
56. Register of Deeds
57. Meter Reader's Card
58. Register of Tax Rolls
59. Register of Departmental Accruals
60. Register of Sinking Fund Accruals
61. Register of Special and Trust Fund Accruals
62. Register of Collections
63. Register of Abatements
64. Register of Receipts from Bond Sales
65. Register of Tailings
66. Register of Deposits
67. Record of Daily Bank Balances

Chapter XXXVII. Ledger Forms

68. Appropriation Ledger
69. Bond Fund Ledger
70. Contract Ledger
71. Claimants Ledger
72. Customers or Depositors Ledger
73. Departmental Expense Ledger
74. Property Ledger
75. Equipment Ledger
76. Live Stock Ledger

Chapter XXXVIII. Statement Forms

FORM

77. Comparative Statement of Budget Allowances and Expense Accounts
78. Statement of the Condition of Appropriations
79. Statement of the Condition of Bond Funds
80. Statement of the Condition of Contracts
81. Inventory of Equipment

Chapter XXXIX. Miscellaneous Forms

82. Combined Cash Book and Journal
83. Pay-Roll—Master Sheet and Attendance Record
84. Petty Cash Voucher
85. Machine Punched Card

Municipal Accounting

CHAPTER I

THE GENESIS OF MODERN MUNICIPAL ACCOUNTING

A Recent Development

Thirteen years ago there was no city in this country whose financial records and public accounts had been so systematized as to furnish the information needed for administrative judgment and proper control. Since that time, however, progress in this field of accounting has been rapid, and now every city may, if it will, install a uniform system of accounts based on broad and comprehensive lines. Hundreds of cities have already adopted such uniform systems of account classification by means of which comparisons are possible, thereby affording a standard of administrative efficiency.

Uniform Classification

The first step in progress toward a uniform system of municipal accounting began in 1901, when the city of Newton, Massachusetts, published its annual report in accordance with the uniform lines recommended for city records by the National Municipal League. The next year Baltimore fell

into line, and during the next two years Chicago, several cities in Massachusetts, and seventy cities of Ohio adopted as far as possible the same recommendations. All this took place during the years 1902 to 1904. In the last named year New York State by law placed the accounts of her cities on a uniform basis; and in 1906 the Commonwealth of Massachusetts also passed an act which required municipal accounting officers to make returns in accordance with uniform schedules.

The work of collecting the statistics of cities has been undertaken by the Bureau of the Census under the direction of its chief statistician, who revised the schedules of the National Municipal League. "Statistics of Cities," which was published as part of the thirteenth census of the United States, is based on a system of uniform classification intended to be standard for all cities in the United States.

Budget Reform

The Bureau of Municipal Research* in New York City has continuously advocated sound methods of budget making. At its suggestion, the Department of Health of Greater New York expanded the items in its budget from twenty-nine titles in 1907 to one hundred and twenty-three in 1908, in order to bring the classification of appropriations into conformity with the requirements of uniform municipal accounting. This work on segregated budgets has continued, until the 1914 budget for New York City has 3,732 titles. Budget exhibitions and publicity together with conferences of social workers and taxpayers have recently brought about important budget reforms in several of our largest cities.

*Known as the "Bureau of City Betterment," January, 1906, to May 3, 1907; then incorporated as the Bureau of Municipal Research with the following programme: To promote efficient and economical municipal government; to promote the adoption of scientific methods of accounting and of reporting the details of municipal business, with a view to facilitating the work of public officials; to secure constructive publicity in matters pertaining to municipal problems; to collect, to classify, to analyze, to correlate, to interpret, and to publish facts as to the administration of municipal government.

Accounting Terminology

The pioneers in the field of municipal accounting reform found that the absence of an established terminology was a serious obstacle to establishing uniform standards. This need has been so keenly felt by the Census Bureau that it has incorporated in its latest edition of the Statistics of Cities the best accounting terminology obtainable; so that we now have in these decennial publications uniform definitions of accounting terms to accompany uniform schedules.

The Herman A. Metz Fund

When Herman A. Metz was Comptroller of New York he saw the necessity for a book of instructions formulated from the best municipal practice, and accordingly in 1909 he published a "Manual of Accounting and Business Procedure," which prescribes the requisite procedure for the proper conduct of public business. The programme outlined is a radical departure from the municipal methods previously in use. In order to extend the work thus begun in New York City, Mr. Metz subsequently established the Herman A. Metz Fund for the promotion of efficient municipal accounting and reporting. This fund provided for the maintenance of an information bureau to answer questions on all subjects pertaining to the proper keeping of a city's records and accounts. The work of this bureau has been set forth by its secretary in a series of pamphlets which contain the most advanced ideas on these subjects.

Training for Municipal Accountants

The Training School for Public Service in New York was founded in 1911 in order to give students of municipal accounting an opportunity for field work. This school affords practical instruction in the best methods of municipal accounting and business procedure. It is expected that the

graduates of the school will be competent to fill vacancies in the executive departments of various cities, where they will assist materially in the movement toward conducting municipal affairs on a sound business basis.

Standard Balance Sheets

Forms of municipal balance sheets were discussed at the annual conference of comptrollers and accounting officers, held in 1912. The object of the meeting was to formulate a standard municipal balance sheet, exhibiting fund, and proprietary accounts, which should serve as approved models for all cities. There is no doubt that most cities will, before long, adopt a uniform balance sheet which will make comparisons with other cities possible, and thereby facilitate the raising of efficiency standards.

General Purchasing Plan Proposed for New York

In March, 1913, William A. Prendergast, Comptroller of New York City, transmitted to the Board of Estimate and Apportionment a plan for the organization of a central purchasing department. Such a department is a feature of the great railroad organizations; and the comptroller, in recommending the plan, stated that the railroads had found it the best form of organization for properly controlling purchases, and that as the conditions in New York nearly resembled those of the great railroads as far as purchases are concerned, it should be equally advantageous in that city. The plan recommended was modeled after that of the Canadian Pacific Railway, with such modifications as were required to meet the conditions existing in New York.

Accounting for the City of Philadelphia

In January, 1914, Comptroller John M. Walton issued a "Manual of Accounting, Reporting, and Business Pro-

cedure of the City and County of Philadelphia," the purpose of which was to prescribe a comprehensive and orderly method of accounting. The method for setting up reserves for repairs and depreciation, as outlined in this book, is noteworthy as being in accord with the most advanced practice.

Progress Toward Uniformity

The movement toward uniformity may be seen in the published reports of more than a third of the cities of the United States with population over 30,000. This movement, inaugurated scarcely thirteen years ago, has already affected the thought of municipal authorities throughout the United States, Canada, and Europe.

Six or eight of our states have now passed laws providing for the installation of proper municipal accounting systems. Uniformity in municipal accounting and the standardization of municipal reports have received the hearty indorsement of the National Municipal League, the League of American Municipalities, the American Association of Public Accountants, the American Economic Association, the American Statistical Association, the Association of Municipal Comptrollers and Accounting Officers, the Government Accountants Association, the American Society of Municipal Improvement, and various other national and state bodies. This wide acceptance of an improved system of municipal accounting and reporting marks the steady advance of the movement. The work of the pioneers in this field has been carried on by many zealous workers, until we now have a complete programme for conducting city business. This programme covers the uniform classification of accounts, segregated budgets, definitions of accounting terms, business procedure, and standard balance sheets, all of which have received the hearty indorsement of the leading societies of accountants and affiliated bodies.

CHAPTER II

KEEPING A CITY'S BOOKS

Public Requirements

Public interest in the subject of municipal accounting reform has expressed itself in a number of pertinent queries:

(1) What methods of keeping a city's books will best reflect the efficiency of an administration?

(2) What standards of economies in operation and management can be created on the basis of municipal reports?

(3) What practical methods of preventing loss and waste can be learned from a city's books and records?

These questions and many others are uppermost in the minds of intelligent voters. Appropriations made by the councils of several cities for investigating the practical significance of their city bookkeeping, and for devising improvements therein, reveal the spirit in which the subject of municipal accounting is now viewed in some quarters.

Classification of Bookkeeping Systems

Broadly speaking, the subject matter and methods of bookkeeping can be grouped under three heads:

(1) We first have the simple cash-received-and-paid books kept by petty tradesmen, whose affairs are of such a primitive nature that they are mostly a matter of memory.

(2) As business assumes a greater magnitude it outgrows these primitive methods, and we find day books, journals,

sales books, and ledgers added to the primitive cash book; by means of single entry bookkeeping real accounts are kept which enable a balance sheet to be prepared and a proprietorship account determined.

(3) The third stage marks the introduction of the double entry system of bookkeeping with its nominal, revenue, and expense accounts, which provide not only an internal check on the clerical work, but also make possible a proper loss and gain statement. Though some comparatively large concerns still operate their accounts by single entry methods, the double entry system has been found the only satisfactory method on which to operate the books of a modern commercial enterprise.

Status of City Bookkeeping

The bookkeeping systems of cities are for the most part primitive in form, belonging generally to the cash book class first mentioned. Reports of municipal transactions even when brought under a uniform classification have thus far been found to consist of little more than schedules of cash receipts and disbursements. But any such itemized report from the treasurer's office only indicates the business transactions of one department and does not reflect the city's interest in the outlays for property and improvements; neither does it reveal the efficiency of municipal administration, nor furnish a basis for comparing one city with another.

The argument advanced by those who are contented with mere cash book schedules and reports, is that the business of a city is on a cash basis, and therefore little more than a statement of cash receipts and payments is needed as an index to the administration of its affairs. But when it is remembered that the collection of a city's revenue is generally from six months to two years in arrears, it is evident that something more complete than a mere cash system is

required to reflect conditions. Again, payments are frequently made from funds provided in anticipation of future revenues, so that much business is done on a credit basis. A mercantile concern whose revenues accrue several months before collection, and whose bills are met from loans made by bankers, would not be considered on a strictly cash basis. And further, though no business is more nearly on a strictly cash basis than that of a railroad, in none is the relation which revenue bears to expense more closely watched. Business done largely on credit, whether by a city, a railroad, or an individual, is best accounted for by the double entry system of bookkeeping.

Revenue and Expense Accounts

By putting the accounts of a city on an income and expenditure basis, all the information relative to operating costs and revenues can be obtained for the use of administrative officers without the necessity of analyzing cash transactions. The exact cost of operation for a period is more clearly shown by a properly kept expense ledger than by any other record. Estimates of amounts required for future operations can be readily obtained by using an analysis of expenses as a basis for budget-making. Statistical figures can easily be obtained for the guidance of administrative officers by dividing the units of work done in any period by the expense incurred for the work performed.

Controlling Accounts

The accounts operated on the general ledger of a city provide a means of preparing summary statements showing financial condition, operating results, and condition of funds. These general ledger accounts contain totals and balances against which the subsidiary ledgers must prove. The totals obtained from the general ledger are independently arrived

at, and therefore form a valuable internal check on departmental records. The method of operating controlling accounts is to take the postings from the totals of the registers in which the original documents describing transactions are entered, while the subsidiary ledgers are posted directly from the documents. When the work of bookkeeping is properly done the balance of a controlling account represents the total of the balances of the corresponding subsidiary ledger.

Complete Information

Budget-making will become a more scientific process when a complete set of financial statements can be promptly furnished to the members of the board charged with the duty of providing funds. Records of past transactions which take into account all increases and decreases in inventories, revenues, expenses, unit cost of construction work, and fluctuations in the value of plant and equipment, will help in determining the proper and possible future demands on the treasury.

Much has been accomplished along the lines indicated, and in one city, at least, a statement furnished to taxpayers fifteen days after the close of each month's business gives the standing of every account on the general ledger, the balances of all appropriations and bond fund accounts, and all cash balances on hand. This monthly report is audited and printed, thus enabling departmental heads to compare their books and balances with those reported by the auditor. The mayor and council then have a reliable statement which shows at a glance whether any department is likely to overdraw its appropriation.

Standards to Be Met

To sum up the present status of city bookkeeping, it is

safe to say that for the most part it is yet primitive in form; that the published reports, even when modeled on uniform lines, are little more than an analysis of the treasurer's transactions; and that generally there is no correct accounting for revenues and expenses for corresponding periods. To bring the bookkeeping of a city up to the standards set by commercial enterprises the following requirements must be met:

(1) The accounts must be kept by the double entry system.

(2) Schedules of revenues and expenses must be substituted for the detailed statements of cash receipts and payments.

(3) Proper statements of revenues due but not collected, and of accrued liabilities, as well as the balances to fund accounts, must be set up in balance sheet form in order to exhibit the present financial standing.

(4) Subsidiary ledgers must be properly controlled by means of general ledger accounts, and proved periodically so as to afford an internal check on operations.

CHAPTER III

PUTTING MUNICIPAL ACCOUNTS ON AN INCOME AND EXPENDITURE BASIS

Equitable Borrowing

The ease with which cities can borrow money tends to make municipal officers charged with administering the finances careless in issuing obligations to be met in the future. In order that the taxes may be equitably distributed to each generation, adequate provision must be made in the annual budget for the redemption of outstanding obligations. Obsolescence and depreciation of the city's capital investment may be foreseen and provided for as in any conservative business enterprise.

Private and Public Business Contrasted

The individuals charged with the administration of public enterprises do not always feel the same responsibility for maintaining capital intact as those in charge of a private or semi-private enterprise. Nevertheless, proper provision should be made to preserve the municipal estate and to hand it over to future taxpayers in the best possible condition, together with suitable reserves for meeting the requirements of obsolescence and depreciation.

Depreciation Reserves

The advice of an engineer concerning the allowances necessary to keep good the municipal plant and equipment, does not always have as much weight with a city council as

it would with a business house. When such allowances have been determined, adequate funds should be set aside to be drawn on whenever the plant requires extensive outlays. Experience shows that the water supply system of a city may show defects at any time, and require extensive alterations or repairs; whole streets may have to be torn up to be relaid with more expensive pavements; public plants and appliances frequently become obsolete and have to be replaced by new apparatus in order to be operated economically.

Municipal Profits

In the case of public utilities, it is obviously necessary to make ample provision for extensive repairs and replacements. Unless such provision is made by arranging for the establishment of reserves, there will be an apparent profit, and consumers will at once demand a decrease in the rates for service, using the argument that the profit belongs to them. It is bad practice in municipal accounting to permit a municipal utility to show a profit unless it can be made the basis for a reduction in the price charged for service.

Public officials usually claim that they can construct public works and render public service cheaper than private contractors or outside service corporations; and so long as they can get accountants in the employ of the city, or even outside experts, to approve their reports, and persuade an indulgent council into believing their statements, they go along without hindrance. If, however, the municipal service departments were assigned their proper share of overhead expense and charges for reserves, in order to show the exact relation between service and expense, it might often appear that there was an extreme lack of efficiency and an unreasonable waste. The only remedy for such a situation is to put municipal accounts on an income and expenditure basis, so

that the expenses of service appear as they really are, and in a form which permits comparison. Then, and then only, will the community be able to judge of the efficiency of public as compared with private management.

Taxpayers have to bear the real burdens of municipal extravagance. It is therefore important that the trustees of the city funds give an accurate account of their stewardship by means of properly kept double entry accounts, which reflect the full details of operation and show the actual returns from investment and expenditures.

A Penalized Public

The financing of a great city is a difficult task, comprehending as it does sinking fund provisions, reserve requirements, and current needs. In the majority of cases, municipal financing has been conducted without adequate accounting control. If each generation, however, is to bear its proper share of the cost of service, both income and expenditures must be properly distributed, and the accounts prepared by means of a double entry bookkeeping system on uniform lines. If this is not done, a penalized public will pay a prohibitive tax rate, and business will stagnate when the burden is heaviest.

An Index of Efficiency

It has been of too frequent occurrence in the past that efficiency and economy in the city government have been judged by the prevailing tax rate. This alone is not a proper basis. A comparison of the results obtained from a city's expenditures would be a better criterion. It is safe to prophesy that in the near future the movement in favor of uniform municipal accounting and reporting will gain such headway that adequate statements for the enlightenment of the public and of prospective investors will be the rule, not

the exception. This will be more satisfactory than merely considering the tax rate as an index of efficiency.

Publicity

The great insurance companies spend annually large sums for publishing statements of their financial standing and earnings, as do also corporations seeking to attract capital for investment. When competing cities shall publish returns showing the services which they render to their citizens as an equivalent of the expenditures, those making the best showing will attract the largest investment of capital. Publicity, sound accounting, and economic business management are essential in exploiting a city's advantages. Secrecy frequently surrounds the operations of municipal undertakings; and even where accounts are kept on approved lines they are not given sufficient publicity to be effective. The spoils system cannot be overthrown or the genus grafter exterminated until effective publicity is more common than at present.

Municipal Ownership

In any discussion of municipal ownership the debaters frequently find it difficult to make comparisons between city operating costs and those furnished by private plants. The city accounts are not uniform, and generally are not even on a double entry basis. Municipal ownership seems to be coming, but at present statistics are not obtainable to prove at what rate our public utilities should be municipalized. The preliminary step in this connection is the standardization of the accounts of those utilities which we now operate, so as to make them comparable with the income and expenditure accounts of utilities privately owned.

It is generally reported that it costs a city more to accomplish results than it costs a private company; but this is

due to inefficient administration. For example, a city-owned car line could dovetail in with other departments. It could be run at night to collect ashes and rubbish or to transport material used in public construction. Opponents of municipal ownership say that it increases the possibility of graft by placing temptation and opportunity in the way of officers. An adequate accounting system, however, showing the relation between expense and service rendered, or units purchased, would minimize this opportunity.

The same degree of economy is not possible in all city departments, as some must be operated so as to give a maximum degree of service without considering economy. Of such nature, for example, is the municipal system of water supply. Pure water is absolutely necessary to health. A school system also should be primarily efficient. On the other hand, a market, ferry, or warehouse should be conducted on strictly business lines. The socialistic idea that the taxpayers should share in the profits from services rendered to the community seems to be gaining ground, and furnishes another reason why the future policy of municipal officers must be guided by suitably constructed accounts.

Fundamental Requirements of Municipal Government

To summarize, each generation should bear its proper share of the burdens of government, the amount of which can be correctly determined only by accounts kept on the income and expenditure basis. Suitable reserves should be set up as an offset to obsolescence and depreciation. No reduction in the service charges of public utility enterprises should take place until competent engineers have approved the depreciation rates. Uniform reports of the operation of a city's departments should be given wide publicity, as a matter of information and to attract new enterprises.

CHAPTER IV

MUNICIPAL FUNDS AND THEIR USES

Necessity for Proper Fund Accounting

During the early days, when municipal affairs were less complex, city funds were easily administered, and the position of custodian of the city's moneys and securities was not an onerous one. But with the increasing activities of the modern city and the multiplying of the services which it renders, the trusteeship of the municipal funds has become an exacting and important duty, requiring no little skill and business ability.

Since the office of custodian of a city's money and securities is one requiring fidelity in the discharge of the duties imposed, it is natural that the taxpayers should look to their trustee for a complete statement of the funds intrusted to his care and a proper accounting for his stewardship, showing the sources from which funds have been received and the objects for which payments have been made. The urgent necessity for such accounting is increased by several causes peculiar to the financial operations of a city. It is necessary to protect the city against the use of particular funds for purposes other than those intended when such funds were established. Proper accounting must provide for an easy and direct auditing of the specific charges against special funds. This would limit the practice of incurring unauthorized liabilities, by automatically showing the relation of obligations incurred, or about to be incurred, to the funds available, and would thus put an end to the careless use of

capital funds for paying the expense of current administration, operation, and maintenance.

Legal Restrictions

The power of municipal officers to incur obligations is usually restricted by law. This limitation requires that no claim or liability against an appropriation should exist to an amount greater than the budget allowance. Authorizations to spend money other than those provided for by appropriations, such as construction bonds, and special revenue bonds for specific purposes, should be constantly under the eye of the administrative officer. If this is not the case, obligations may be incurred which the city cannot meet at maturity. All agreements, whether formal or implied, by virtue of which the city stands to the public in the relation of a trustee or special agent, should be recorded and brought under accounting control. Every transaction entered into by the city has a direct or indirect relation to one or another of the legal restrictions on expenditures, and must therefore be recorded on one or another of the appropriation or bond fund accounts.

Classification of Funds

As all obligations entered into by the city pertain to some particular fund out of which they must be liquidated at maturity, these obligations should be classified as follows:

As against the city treasury:

(1) Current Fund
    (a) Appropriations
    (b) Special Revenue Bond Funds
(2) Capital Fund
(3) Special and Trust Funds

As against the sinking fund commissioners:

(4) Sinking Funds

(1) The current fund is the one through which most of a city's transactions pass. It is made up of the resources which may be appropriated to meet liabilities incurred on account of current administration, operation, and maintenance. Its revenues come mainly from two sources, each of which has a distinct class of authorization:

(a) Resources derived from the levy of taxes, the collection of revenues, and sale of short-term obligations issued in anticipation of the collection of taxes. These are all subject to restrictions stated in appropriations.

(b) Resources derived from the sale of special revenue bonds which are issued in anticipation of tax levies (provision for their redemption being included in the tax levy following the year of the issue) and which are subject to special revenue bond fund authorizations.

Current fund liabilities are those obligations which are to be paid out of the general resources. A surplus in the current fund at the end of a year reduces the amount to be raised by next year's tax levy; and a deficit in this fund would naturally increase the amount to be raised the following year.

(2) The capital fund provides for construction work, and includes all the resources derived from the sale of long-term bonds; it may exist in the shape of cash, or other resources. Capital liabilities are those to be paid from the capital resources.

(3) Special and trust funds include all the resources, not yet expended, which a city holds in its capacity as trustee or special agent of the municipality. The resources may

be in the shape of cash, or temporary investments held by the city for the benefit of others.

(4) Sinking funds are those resources held by a city in reserve for the amortization and redemption of the city debt. The creation of a sinking fund is an expedient to distribute over a long period of time the outlays made by a municipality on account of extensive public works. It is usual to define a sinking fund as a contract which is entered into with the purchasers and holders of long-term bonds, redeemable by sinking fund provisions, and which provides for the setting aside from current revenue annual instalments to accumulate at interest, in order to amortize the loan. This contract holds until the maturity and payment of the last bond issued under the provisions of such sinking fund.

The manner of creating a sinking fund is to draw from the general fund the cash required for an instalment, and deposit it in the sinking fund or with the sinking fund commissioners. There may be several sinking funds or but one perpetual fund. As soon as a sufficient amount of cash has accumulated in a sinking fund, city bonds are generally purchased therewith. Hence, it is evident that the sinking funds which accumulate are continually available for general city purposes, without in any way impairing the implied trust. It is not an easy matter to determine just what amount must be deposited annually in a sinking fund at compound interest to amortize a bonded debt, because it is impossible to forecast the exact rate of interest which will be earned by the securities purchased. If the instalments on a twenty-year bond issue are calculated—by reference to an annuity table—on the assumption that the annual payments will earn 3½%, while actually they earn only 3¼%, there will be a deficit in the fund when the bonds become due. If the fund earns 4% there will be a surplus. In the former

case current taxes are too low, and the burden of making up the deficit will have to be borne by future property owners. In the latter case the taxpayers are too heavily assessed for the benefits enjoyed.

In order to provide against either a surplus or a deficit in any sinking fund, when the time comes to extinguish the debt, interest is sometimes omitted from the calculations. The amount of the bond issue to be redeemed is divided by the number of years intervening before the date of maturity, to ascertain the amount of the yearly or half-yearly instalments. For example, a twenty-year bond issue of $100,000 would require an annual instalment of $5,000 to amortize the principal of the debt at maturity. The interest yielded by the cash and sinking fund securities is ascertained yearly, and is used to pay interest on the outstanding bonds, a sufficient appropriation from the current fund being added to make up the full amount required to meet the payments to bondholders. Another approved plan of raising money is by means of serial notes, a part of the debt being redeemed annually. This method avoids the uncertain element of interest on sinking fund investments, and simplifies the handling of maturing obligations.

Bonded Debt

The bonds issued by a city are generally defined as evidences of indebtedness, usually issued under seal by or in behalf of a municipal corporation, negotiable in form, payable at some future time, transferable by indorsement or delivery, and bearing interest coupons payable annually or semiannually. They are issued by municipalities for the purpose of raising money for some authorized public purpose. As previously mentioned, they are frequently held by municipalities themselves for sinking fund purposes. Insurance companies, trust companies, and savings banks also

buy them. Cities have an implied power to issue bonds, this being included in the power to borrow money. However, the purpose of a bond issue must be a public or corporate one, and the issue cannot exceed the borrowing capacity of a city as determined by law. Bonds issued in excess of the debt limit are void. In figuring a city's debt the sinking fund assets are deducted from the bonded debt in order to arrive at the borrowing capacity.

The cash and securities belonging to municipal funds should appear under appropriate headings on the asset side of a city's balance sheet, and the obligations incurred, as shown by notes and bonds, on the liability side. The verification of these assets and liabilities is one of the first steps in the examination of a city's funds.

CHAPTER V

BUDGET-MAKING AS A MEANS OF CONTROL

Budget-Making

The annual budget or appropriation bill is a schedule for the expenditure of the next year's taxes and revenues, and generally reflects more of the business side of city government than any other document. When properly set up it gives a complete view of the things which the city proposes to do for the coming year, and from an accounting point of view affords the most satisfactory method yet found of gaining control over municipal expenditures. Generally speaking, a properly adjusted financial programme for a municipality can result only from a well arranged budget.

Many unscientific methods have been, and are, being used in making municipal budgets. The general procedure heretofore has been to send out requests for estimates; whereupon each departmental head asks for a larger appropriation than necessary, hoping to still get all that is actually needed, after the inevitable cut. Increases in pay-roll allowances are frequently asked for on the pretext that additional employees are needed to carry on the work of a particular department; but when the increase is granted, salaries are raised and no additional employees are hired. It has even happened that large numbers of voters have been given jobs prior to election, only to be laid off afterward. These and other evil practices in connection with municipal budgets show the necessity for methods which shall remedy current abuses.

Careless methods in budget-making in one New England

city resulted in a series of overdrafts, increasing during a period of ten years from $48,059.82 to $246,926.66. This means that owing to the increase in annual expenditures, the revenue continually fell short of expenses. A continuance of such conditions would put a city in debt beyond its borrowing capacity; and the easiest remedy is a change in the method of making the budget. The first requisite in budget reform is a proper procedure. The forms provided for making requests for annual appropriations should be uniform for all the city departments; and when the proposed budget is in shape for consideration, public meetings should be held so that taxpayers may discuss it. If found necessary, the co-operation of citizens' associations should be secured in order to obtain the desired action on the part of municipal authorities.

The preparation of the annual budget is generally a matter of charter provision. The Greater New York charter provides that a budget be made between October 1 and November 1, showing the amounts estimated as necessary to pay the public expenses of the city for the ensuing calendar year. Sufficient time is allowed before the final form of the budget is determined, for taxpayers to be heard in regard to proposed appropriations.

Segregated and Lump Sum Budgets

In order to derive the maximum of usefulness from a budget as a means of controlling expenditures, it must be either segregated or in lump sums supported by cost schedules. The segregated budget provides separate appropriations covering each specific function of a department, while the lump sum form is merely a blanket appropriation covering its needs as a whole; either form when properly operated puts a curb on the spending propensities of departmental officials. The lump sum budget has the advantage over the

segregated budget in that it allows departmental officers more freedom in the use of funds, while the accompanying cost schedules, by showing the work to be done and the unit cost of doing it, still keep the departments under control. The schedules provide also a means of comparing the cost of work contemplated by the city with the estimates of contractors. Standards of efficiency can thus be set up and checks put on waste.

The burden of preparing the annual budget ordinarily rests upon the chief financial officer, such as the comptroller. This officer, in order that he may perform his work more intelligently, requires departments, boards, commissions, and officers generally to submit written estimates of their financial needs for the ensuing year. These estimates cover salaries and wages, hired teams, horses and carts, supplies, material, equipment, and service by contract or agreement. In some cases a contingent fund also is requested. The facts thus presented for budget-making are best arranged according to functions and activities; and by prescribing the forms to be used, the comptroller may secure uniformity in the departmental estimates.

Estimates of Salaries

The most satisfactory plan for preparing estimates of salaries is to distinguish regular from temporary employees. Most salaried employees are, of course, regular, but a playground attendant, an arboriculturist or horticulturist can work only during the warm months of the year. A well devised budget is generally accompanied by a provision to the effect that but one-twelfth of the yearly allowance for regular salaries is available each month, while the temporary salaries are available until the allowance is exhausted, or until the end of the year.

The estimate for regular salaries should state:

(1) Title of position
(2) Yearly rate
(3) Number of incumbents during current year
(4) Yearly rate of expenditure during current year
(5) Amount requested for ensuing year

Under these captions the various grades of service in the department are described for use in preparing the budget schedules. Thus, the first line of a departmental estimate for regular salaries might read:

Bookkeepers, 2 at $1,200—$2,400. Amount requested, $3,600.

This line shows that one additional bookkeeper is requested for the ensuing year. If the request is granted, the budget schedule line for the ensuing year will read:

Bookkeepers, 3 at $1,200—$3,600.

Of the amount allowed, one-twelfth ($300) will be available monthly, because the appropriation is for regular salaries.

Requests for temporary salaries should be set up under the following heads:

(1) Title of position
(2) Rate
(3) Number of days or months allowed in current year
(4) Number of days or months requested for ensuing year, and amount

The various grades of service are specified and described under these captions as follows:

Playground attendant at $1,440 (24 months) current year. 36 months requested, $4,320.

This means that during the current year playground attendants were paid at the rate of $1,440 a year, or $120 a month. For the ensuing year an appropriation of $4,320 is requested, which would enable thirty-six playground at-

tendants to be employed one month, eighteen for two months, or nine for four months, as might be deemed desirable.

Estimates of Wages

Wages differ from salaries in that they are based on a per diem rate. As in the case of salaries, two classes of wage estimates are submitted—one for permanent and one for temporary employees.

The estimate for regular wages should segregate:

Men employed every day..... 366 days
Men not employed Sundays..... 314 "
Men not employed Sundays or holidays... 304 "
Men not employed Sundays, holidays, or Saturday afternoons..... 279 "

The request for regular wage employees should be set up under the following heads:

(1) Title of position
(2) Rate
(3) Class of employment, 366, 314, 304, 279 days
(4) Number of employees, current year
(5) Amount allowed, current year
(6) Number of employees requested, ensuing year
(7) Amount requested, ensuing year

The first line of a departmental estimate for regular wages might read:

Laborers (10 at $2, 304 days) 3,040 days, $6,080 current year. (15 at $2) 4,560 days, $9,120 requested for ensuing year.

This means that during the current year ten $2 laborers of the 304-day class were provided for, and that an increase

in the pay-roll is requested to provide for five additional laborers, making fifteen in all, or 4,560 days (15 for 304 days) at $2 per day, which makes the $9,120 requested.

In making up the request for temporary wages the same form is followed as in preparing the request for temporary salaries, the amount depending upon the rate and the number of days.

Estimates for Hired Teams, Horses, and Carts

Estimates of the allowance required for hired teams, horses, and carts, should show the following facts:

(1) Description of horses, carts, and drivers
(2) Rate
(3) Number of days employed and amount, current year
(4) Number of days requested and amount, ensuing year

The first line of a budget request for tip-carts and drivers might read:

> Tip-cart and driver, at $5 (300 days), $1,500. 400 days requested for ensuing year, $2,000.

Whenever any request of a department for an increase in appropriations for salaries, wages, or hired teams, horses, and carts, is vetoed, the corresponding budget schedule line for that department remains the same as in the previous year.

Estimates for Supplies, Materials, and Equipment

A separate sheet should be filled out for each class of supplies or materials for which a budget allowance is requested. The amount consumed during the previous calendar year, as well as that consumed during the first six months of the current calendar year, should be shown, in

addition to the January 1st and July 1st inventories of the current year, as follows:

(1) Class of goods
(2) Amount consumed, previous year
(3) Inventory of stock, January 1st of current year
(4) Amount consumed, first six months, current year
(5) Inventory of stock, July 1st of current year
(6) Amount requested for ensuing year

Whatever request is granted to a department or division should show the amount allowed for the purchase of each class of supplies.

As in the case of supplies and materials, a separate sheet should be made out for each class of equipment requested. It is necessary to show the amount spent, not only during the previous year but also during the first six months of the current year. The following form is a good one to use in setting up the budget request for the purchase of equipment:

(1) Class of equipment, previous year
(2) Amount expended, previous year
(3) Inventory of stock, January 1st of current year
(4) Amount expended, first six months, current year
(5) Inventory of stock, July 1st of current year
(6) Amount requested, ensuing year

Service by Contract or Agreement

Many obligations are entered into by a city under the head of service by contract or agreement. The service rendered by a telephone company is an example of this class. When preparing budget requests covering such services, a separate sheet should be used for each separate class of service required. The form used should give the following facts:

(1) Nature of work or service
(2) Amount expended, previous year
(3) Amount expended, first six months of current year
(4) Amount requested for ensuing year

The budget allowance for each class of service by contract or agreement should be specified when appropriations are finally set up.

Lump Sum Estimates

Departments which operate a system of cost accounting are in a position to prepare a schedule of work to be done as the basis for obtaining lump sum allowances. The lump sum estimate schedule should give the following information:

(1) Description of work
(2) Units of work, previous year
(3) Units of work, first six months, current year
(4) Unit cost of work, previous year
(5) Unit cost of work, first six months, current year
(6) Units of work for which allowance is requested
(7) Unit cost of work for which allowance is requested
(8) Amount requested for pay-rolls
(9) Amount requested for other cost items

Under heading (1) should be listed the kinds of work covered by the lump sum requested. Opposite each kind of work described are to be entered the details called for by headings (2-9). These include the units of work done and the unit cost of such work, not only for the preceding year but also for the first six months of the current year. The request for budget allowances shows the units of work for which an allowance is requested and the unit cost of same. Finally, the total amount of the request is split up between

pay-rolls and other cost items. The lump sum estimates are nothing more or less than cost schedules.

Statistical Exhibit of Departmental Estimates

In order to show at a glance just what increases are asked for in departmental estimates, a statistical exhibit should be prepared showing all increases and decreases. By reference to such a comparative exhibit of previous requests, appropriations, and expenditures, the financial officer charged with the responsibility of preparing the budget is prevented from overlooking any important fact.

The Tentative Budget

The officer charged with the duty of preparing the budget generally gives departmental heads an opportunity to discuss their estimates and to give any information, not contained in the departmental estimate, as may justify any increases over the previous budget. The financial officer has assistants at hand to give reasons for any modification of departmental estimates recommended, and to meet any objections raised by departmental heads. The public also is permitted at this time to speak for or against the suggested estimates. The general practice is to have separate hearings on the estimates of each of the larger departments.

Approval or Veto of Budget

After the hearings on the tentative budget have been completed, the estimated needs of the city for the ensuing year should be arranged according to departments, bureaus, officers, boards, or commissions. When completed, this tentative budget goes to the board of aldermen, which sometimes makes changes in the estimates, except such amounts as are allowed by law, or allowances for state taxes or for any necessary liquidation of the city debt. The lines of the

budget should be numbered in order to facilitate the work of referring to specific items.

After the board of aldermen has considered the budget, it is generally sent to the mayor for his approval or veto. If he vetoes any part of it, it is returned to the board of aldermen for further action. Unless, however, the mayor's veto is accepted by the votes of the board of aldermen, the amounts stand as part of the budget. Prior to a certain date the budget must be certified, filed in the office of the chief financial officer, and published. The budget is generally accompanied by certain provisions forbidding transfers from one class of appropriations to another.

Modification of the Budget

It is often found desirable during the current year to provide for such needs of the several departments as may not have been foreseen, by making certain modifications in the budget. A department wishing to accomplish this should make application to the finance department for such modification, setting forth the reasons for the change desired. Such requests are generally for changes in grades of service, creation of new positions, increases in salaries, issues of special revenue bonds, and transfers of funds from one code number to another. Modifications of the budget are generally submitted to the board of aldermen for approval.

Accounting Control

The allowances to the various departments, bureaus, officers, boards, and commissions as set forth in the budget, become available at the beginning of the fiscal year. In order to place budgetary allowances under proper accounting control, departmental accounts should be identified under code numbers. Monthly departmental records should be reconciled with the books in the central office and any dis-

crepancies adjusted. Quarterly and annual reports of the condition of the appropriations should be prepared and forwarded to the mayor.

Summary

No expedient for controlling the finances of a city has been found more satisfactory than a properly made budget. Departmental estimates should be based upon statements prepared from books kept on an income and expenditure basis. After allowances for the ensuing year have been decided upon, departmental heads should be required to furnish satisfactory reasons for any modifications of these allowances. At all times the condition of the appropriation accounts should be readily ascertainable for the guidance of the chief financial officer, and once a month a statement of unencumbered balances of such accounts should be prepared.

CHAPTER VI

BOND FUND AUTHORIZATIONS

Funding Relations of a City

The financial problems and operating policy of a municipality differ considerably from those of a private business enterprise; but the administrative problems are the same. The same judgment and control are required from the superintendent of a municipal hospital, school, water-works, dock, or ferry as from the superintendent of a similar private enterprise. Information gathered for the use of executives in the work of administration must obviously be the same for public as for private enterprises, and must be based on the practical application of sound accounting principles and methods.

A city not only acts in a proprietary capacity as owner of property, but also in a funding capacity; that is, it has the power of appropriating moneys to certain uses. In the case of bond fund authorizations, restrictions regarding disbursements are placed upon municipal authorities, which state definitely what may and what may not be done with the non-revenue and special funds provided for purposes other than those designated in the annual budget. Outlays for improvements, and expenditures designated as capital outlays, are made from bond fund authorizations.

The annual budget also places restrictions on the power of municipal officers to spend the funds provided by taxation or otherwise, to meet the expense of general government and of the municipal departments. In a municipal balance

sheet the fund accounts should appear in the first part, and the proprietary accounts in the second part.

Avoiding Overdrafts

Attention is frequently called to the fact that a city has no Loss and Gain account such as is kept by a commercial enterprise. But a city may place restrictions on expenditures from its funds beyond which it cannot go without being in the position of a business run at a loss. In order that these funds may not be overdrawn, it is essential that certain facts be brought to the attention of the comptroller or other financial officer. Before he can audit a claim properly, he must be informed as to the authorization for spending money for the purpose specified in such claim. He must also know the amount of the unencumbered balance remaining in the fund out of which the claim would be paid. Unless these important facts are readily ascertainable, expenditures in excess of the appropriations may be made, and an overdraft result.

Bond Funds

Bonds and similar obligations are authorized to provide funds for various purposes and can be conveniently classified under the following heads:

(1) Revenue bonds
(2) Special revenue bonds
(3) Construction bonds
(4) Construction bond notes
(5) Assessment bonds

(1) Revenue bonds are certificates of indebtedness issued in anticipation of the collection of revenues for the purpose of providing funds to meet expenditures authorized by the current budget. The amount of revenue bonds au-

thorized must not exceed the estimated proceeds of the tax levy in anticipation of which they are issued.

(2) Special revenue bonds are certificates of indebtedness issued to meet expenditures other than those provided for in the current budget. Such certificates of indebtedness are redeemed out of the tax levy for the year next succeeding the year of issue, the necessary allowance being provided for in the budget of that year. Some of the objects for which an issue of special revenue bonds may be authorized are:

Expenses incurred in condemning unsafe buildings
Judgments recovered against the city
Expenses of an unusual nature authorized by the board of aldermen
Preventive measures against contagious or infectious diseases

(3) City bonds issued for construction are generally long-term obligations, and are issued for the purpose of providing funds to pay awards, costs, damages, and other expenses of acquiring title to lands required for public purposes; for the construction and equipment of public buildings; for laying out, opening, regulating, grading, or improving streets or parks; and for the construction of sewers, etc. Any payment out of assessment funds not assessed upon the property benefited, but to be borne by the city, is usually raised by the sale of long-term bonds. The issue of long-term obligations for other purposes than those mentioned can be authorized in accordance with charter provisions. These long-term bonds frequently run for fifty years.

(4) Construction bond notes are sometimes issued in anticipation of an issue of long-term bonds. The proceeds of such notes must be used for the same purpose as that for

which they are authorized. These notes are redeemed when the bonds are sold.

(5) Assessment bonds are authorized to provide for the payment of expenses incurred or to be incurred on account of paving streets, building sewers, or doing any contract work in accordance with provisions made by ordinances, which payments are to be recovered later from the owners of the property benefited. Assessment bonds are also authorized for raising sums of money necessary to pay any damages awarded to property owners for the right of way required for drains and the expense of plans, surveys, and commissioners' fees. Such bonds are generally issued for a period not exceeding ten years. The money collected from property owners, in anticipation of which assessment bonds are authorized, is set apart as a trust fund and applied to the redemption of the principal and interest of the outstanding bonds.

Journal Entries

Bond fund authorizations, as soon as allowed, should be incorporated into the general ledger fund accounts by means of proper journal entries. The authorizations set up act as drawing accounts against which can be charged contracts, open market orders, and miscellaneous claims incurred for the purposes indicated by the titles to the accounts. The unencumbered balances of bond fund authorizations appear on the fund account balance sheets.

CHAPTER VII

PURCHASE RECORDS

Central Purchasing Department

A good place to begin the practice of municipal economy is in the purchase of materials, supplies, and services. Successful private enterprises have made substantial savings by properly centralizing their purchasing departments. The introduction of commercial methods into municipal affairs through a centralized purchasing department is an important step in the reorganization of a city's business methods. Such a department enables the city to buy through its general purchasing agent, at minimum unit prices, the gross quantities of supplies required, instead of purchasing through numerous agents at widely varying unit prices, as is generally done. It may be observed that this system of centralized purchase, a single purchasing head, and distribution through a general storehouse, is in accordance with the present practice of the largest and most successful railroad enterprises.

General Purchasing Agent

Whenever it is desired to operate a centralized purchasing department it is necessary to create the office of general purchasing agent. He should be vested with full authority to purchase all supplies required by the various departments, and to prepare all vouchers for payment thereof. His tenure of office should continue during good behavior and he should be removable only upon proved charges. He should be requisitioned upon for all supplies

used by the various city departments and should be held responsible for the cost thereof, whether delivered direct or through the general city storehouse. One assistant to the general purchasing agent should be appointed from each of the larger administrative departments, and these assistants, being transferred to the central office, will maintain a supervisory control for their several departments over the acts of the general purchasing agent. This control acts as a check upon any abuse of the position—an objection frequently urged against the centralization of the purchasing power.

The organization of a department of purchase provides for proper control over all orders for the purchase of supplies. Efficient management will require that full information regarding prices, discounts, f.o.b. points and deliveries, shall be kept available, and this means that a bureau of information must be operated in connection with the purchasing department. When such a bureau is properly maintained, there should be no difficulty in securing any information desired regarding vendors, materials, supplies, or services.

Vendor's Index Card (Form 1)

This form provides for a complete record of the goods or services which a vendor furnishes. One card is used for each vendor, whose name and address appear in the upper part of the card. Provision is made for the following information in separate columns:

(1) Order number
(2) Date of order
(3) Requisition number
(4) Place of delivery
(5) Description of goods ordered
(6) Estimated cost of goods
(7) Date of invoice
(8) Amount of invoice

(9) Date of voucher
(10) Voucher number

As new vendors are dealt with they should be entered on the index in order to keep the files up to date.

Article Index Card (Form 2)

This form is used as a cross reference to the vendor's index; the name of the article appears in the upper part of the card. The columns of the article index card provide for entering the following information:

(1) Order number
(2) Requisition number
(3) Vendor's name
(4) Place of delivery
(5) Estimated cost
(6) Quantity ordered
(7) Description of goods or services ordered

Any new goods purchased or likely to be purchased, should be entered on an article index card, together with the other data relating to such goods, so that full information can be obtained as needed.

Standardization

Much has been accomplished in some cities in the standardization of supplies and materials. Where this is possible, bids can be obtained on a uniform basis, and articles of the same standard quality secured. Whatever standards are determined upon should be made a matter of exact record, so that any one interested can easily refer to them. In New York the Commission on Standardization has been engaged for more than three years in investigating the methods followed in the purchase and distribution of supplies, with the intention of making a constructive report on the standardization of purchases. They began their in-

vestigations with the supplies consumed in the hospitals, charitable institutions, and prisons. The food supplied to these institutions can be readily standardized so as to provide a basis for specifications to be used in making contracts and in passing on deliveries by vendors. Each class of goods purchased requires a different set of specifications.

In standardizing supplies net weight, net measure, and full numerical count should be understood to be meant when the words weight, measure, or count are used.

Non-Technical Specifications

(1) Specification for Fresh Meats. The specifications for furnishing fresh meats generally provide that receipts shall be given to the vendor for the weight received at the points of delivery. Vendors are usually required to furnish only full carcasses of prime beef, averaging 625 pounds per carcass. When only fore or hind quarters are contracted for, the specifications generally state the approximate weight of each which will be accepted. Specifications for mutton generally state that deliveries shall be by the carcass, of prime quality, and weighing between 45 and 65 pounds dressed. Veal is generally contracted for in carcasses from 90 to 125 pounds in weight. The specifications for other fresh meats are of similar character.

(2) Smoked Meats. Bacon must be prepared from carcasses weighing from 150 to 200 pounds, sugar cured, smoked, and in strips weighing from 5 to 6 pounds. Hams ordinarily weigh from 12 to 14 pounds.

(3) Poultry. The poultry purchased for institutions consists of chickens, fowl, ducks, and turkeys, which are required to be young, fresh, fleshy, and of good quality. The chickens must weigh from 2½ to 4½ pounds, fowls from 4 to 5 pounds, ducks about 5 pounds, and turkeys not less than 10 nor more than 15 pounds.

(4) Rye Straw shall be "No. 1, straight rye straw," in large bales, clean, bright, long rye, pressed in bundles, sound and well baled.

The successful bidder shall, after award of the contract, submit to the Bureau of Audit of the Department of Finance a sample of sufficient size and quantity similar to the sample submitted with his bid, and shall deliver similar samples to each and every point of delivery.

Payments shall be made on the basis of the net weight delivered.

All straw rejected under the contract as not coming up to the contract requirements shall be removed forthwith by the contractor.

Technical Specifications

The above examples furnish simple illustrations of the standardization of certain supplies and preparing specifications to be used in contracts. Many supplies are difficult to standardize, and technical knowledge is required to write the specifications. The following is an example:

SPECIFICATION FOR RUBBER BLANKETS

Material.—Rubber blankets shall be of black rubber drill, having what is known to the trade as "washed finish."

Size.—Finished size shall be seventy-two (72) inches long; thirty-three (33) inches deep. The length of back shall be fifty-four (54) inches.

Weight.—The weight shall be not less than six (6) pounds.

Lining.—The lining shall be a twill wool sheeting either fawn in color or woven checks.

Trimming and Make-up.—The blankets shall have square corners at front; round corners at rear; one and one-half inch strap of rubber down back; white duck facing in breast; two breast straps with japanned buckles and round under-leathers. Slit in sides for saddle girth shall be reinforced with leather.

Leathers.—All leathers shall be eight-ounce substance cut from prime part of hide, and shall have greased bridle finish.

Payment.—Payment shall be made for the number of blankets accepted, at the price bid per blanket.

Proposal for Bids

To enable vendors to bid intelligently, it is necessary to prepare proposals for bids, which are in the form of a contract, and are required by law to contain the following particulars:

(1) A statement that the person making the estimate shall furnish the same in a sealed envelope to the head of the proper department, at his office, on or before a day and hour named.

(2) A statement of the quantity and quality of supplies, or the nature and extent, as far as possible, of the work required.

(3) A statement that the estimates received will be publicly opened at a time and place specified by the head of the department issuing the proposals.

(4) A statement of the amount of security required for the performance of the contract.

Bid Sheet

The bid sheet on which the vendors fill in the prices at which they propose to furnish articles required by a city, gives a list of the quantities required under each class named, as follows:

CLASSIFICATION NO. 1—ENGINEERS' SUPPLIES

Line No.	Quantities and Articles Required	Price per Pound	Total of each Line No.	
			Dols.	Cts.
1	12,000 pounds Calcium Chloride..per pound			
2	4,000 pounds White Cotton Waste, equal to sample .....per pound			
3	12,000 pounds Boiler Compound, equal to sample .....per pound			
4	400 pounds Ring Packing Garlock, No. 200 H. P., or equal.....per pound			

Contractors are generally required to give the following information on the bid sheet:

(1) The name and place of residence of the person making the contract.

(2) The names of all persons interested with him in the contract; and if no other person is interested, it shall distinctly state the fact.

(3) A statement that the contract is made independently of any other person making an estimate for the same purpose, and is in all respects fair.

(4) The oath in writing of the party making the estimate, that the several matters stated therein are in all respects true.

Estimate Box

It is customary for each department receiving bids from vendors to keep an "Estimate Box," to receive bids for which proposals have been issued. This is kept locked by the head of the department. Bids duly presented are deposited in the box through an opening in the top, and remain there until opened by the head of the department, in his office, at the day and hour appointed. He reads all bids aloud in the presence of the chief financial officers and of the parties making bids if any chance to be present; any estimates which do not conform with the legal requirements are rejected.

Samples

When samples of articles for which proposals are issued can conveniently be furnished, vendors are usually instructed to deliver them at the office of the purchasing agent before the opening of the estimates. If bidders fail to furnish samples when requested, or if the samples do not come up to

the quality required in the proposals, the estimates are rejected.

Sureties

The bids must be accompanied by the written consent of two householders or freeholders in the city, or of a surety company, to the effect that if the contract is awarded to the person making the estimate such freeholders or company will, upon such award, become bound as sureties. The consent here mentioned is accompanied by the oath in writing of each signer that he is a householder or freeholder, and is worth, over and above all his debts, the amount of the security required for the completion of the contract, and that he has offered himself as a surety in good faith, and with an intention to execute the bond required by law. A like affidavit is required of the officer of any surety company so consenting. The chief financial officer usually examines the sureties in respect to the items and details of their property, before accepting them.

Delinquent Contractors

It is the duty of the city officials to enforce the faithful execution of every contract made with the city. When a contractor fails to keep the terms of his contract in any particular, it is the duty of the officers of the department for which the work is being done to complete it in the same manner as provided in the contract. The cost of completing a contract which has not been fulfilled is charged against the delinquent contractor. It is quite customary, however, for the head of a department to extend for a reasonable time the period fixed for the completion of work.

Request for Purchase (Form 3)

Where a city has a centralized purchasing department, all supplies required by the various departments are obtained

by making out a "Request for Purchase." All supplies—except perishable articles for daily delivery, and coal, wood, and forage—are bought by the general purchasing agent for delivery to the general city storehouse in the gross quantities required for the entire city.

Perishable supplies for daily delivery, and coal, wood, and forage are bought by the general purchasing agent for delivery to the departmental storehouses designated on the purchase order. The request for purchase carries the departmental or general storehouse designation, the requisition number, the title of fund chargeable, and the account number.

The columns of the request for purchase provide for the following information:

(1) Quantity. Under this head is entered the weight or other measure of the articles to be purchased.

(2) Articles. This provides for a commercial description of the goods desired.

(3) On Hand and Due. In this column is entered the quantity in units of weight or measure of the articles requisitioned, either on hand, or due to complete unfilled orders.

(4) Monthly Consumption. Here is entered the units of weight or measure of the average monthly consumption of articles requisitioned for the preceding three months.

(5) For What Purpose. This explains the use to which it is intended the articles requisitioned shall be put. "Equipment" might be either for replacements or additions.

(6) Quantity or Weight. This gives the units of measure or weight in which the purchases are to be made.

(7) Approximate Value. Here is entered the approximate total value of the supplies to be bought, based upon the unit prices paid in the past.

(8) Order Number.

The information contained on the request for purchase enables the departmental head who signs it to decide whether the supplies called for are actually needed. The proper preparation of this form involves considerable labor; but no request for purchase can properly be made unless the facts called for are in the possession of the storekeeper. The request for purchase shows whether or not an article called for is standard, and therefore in the storehouse, and thus prevents overstocking.

This form also includes a certificate to be filled in by the department head or storekeeper, stating that there is to the credit of the fund out of which the expenditure for supplies is to be made, sufficient money to cover the payment voucher. The certificate as to the sufficiency of funds protects the general purchasing agent from issuing supplies to a value greater than the authorized appropriation. The person preparing the request for purchase is also required to certify that the articles specified are necessary for the use of the department for which they are requested and are to be used solely for the benefit of the city. When properly filled out and certified the requests for purchase are transmitted through the assistant purchasing agent representing a department, to the general purchasing agent.

Classification of Purchases

The purchases made by a city readily fall under three general heads: contracts, open market orders, and miscellaneous claims.

(1) Contracts are formally executed agreements entered

into by the city for the delivery of materials or supplies, or for the rendering of service, to be paid for from municipal funds. Contracts are particularly distinguished by the fact that the thing to be contracted for must be advertised, and competitive bids be received and acted upon before the contract is awarded.

(2) Open market orders are orders issued by purchasing agents for materials, supplies, or service, not under formal contract. The quality, quantity and price of such commodities are determined by correspondence or by personal interview with the vendor. Delivery by the vendor receiving the open market order constitutes an informal contract.

(3) Miscellaneous claims cover petty expenditures, such as carfare vouchers, which cannot be provided for either by contract or by an open market order.

Manifold Purchase Orders (Forms 4-6)

The purchase orders are numbered and bound in pads, ready for use. They are made out in quadruplicate, two copies going to the vendor, one to the receiver of goods, and one to the purchasing agent's office. Two order forms are provided to designate the various classes of purchases:

(1) Contract orders are issued for goods or services purchased under formal contract.

(2) Open market orders are issued for goods or services not purchased under formal contract.

The words "contract" or "open market order" may be stamped on the face of the form to distinguish the different classes of orders.

Vendor's Copy of Purchase Order (Form 4)

The vendor receives an original and a duplicate copy of the purchase order. The original copy has the following conditions printed on the back, to which reference is made on the face of the order:

(1) "No goods will be paid for unless regularly ordered by the General Purchasing Agent."

(2) "The seller of an article to be used for a particular purpose undertakes without any exception that it is reasonably fit for the purpose."

(3) "No charge for packing will be allowed."

(4) "Invoices in quadruplicate must be sent with shipment."

(5) "In case of weekly deliveries or monthly orders, or partial deliveries for other reasons, the comptroller's copy of this order must accompany the last delivery."

An open market order may call for deliveries at several points, but only one voucher may be issued for the payment of the order, thus reducing the clerical work involved in the bookkeeping department.

The contract purchase order gives vendors similar instructions as to delivery of supplies, but the contract number is stated on the face of the order; and such an order is subject to all the provisions of the contract.

A contract order may provide for deliveries from day to day throughout a month. In this case invoices are not required with each delivery, but a shipping memorandum known as a delivery slip is used.

Storekeeper's Advice of Goods Ordered (Form 5)

In establishing accounting control over stores it is of the utmost importance that the storekeeper be advised regarding articles which are to be delivered by vendors, as without such advice he may put into stock goods intended for other customers. The triplicate copy of the purchase order is therefore sent to the storehouse as a notification that goods or service have been ordered, and provides the store-

keeper and his assistants with necessary information in regard to purchases.

Office Copy of Purchase Order (Form 6)

The fourth copy of the purchase order is known as the office copy, and is printed on heavy paper suitable for filing in a card index tray.

Each copy of the quadruplicate purchase orders should be on paper of a different color, as blue, buff, pink, or white, in order to prevent confusion in handling.

Register of Contracts (Form 7)

It is necessary to keep a record of purchases made in accordance with formal contracts; and for this purpose a "Register of Contracts" is operated. This register provides for information pertaining to contracts, as follows:

(1) Date of contract
(2) Number of contract
(3) Name of contractor
(4) Description of material supplied or services contracted for
(5) Symbol indicating detail of appropriation or bond fund encumbered
(6-10) Distribution of contracts under appropriations or bond fund accounts

At the end of each month the register of contracts is footed in order to provide totals showing the amount of encumbrances for the month registered against appropriations and bond fund accounts.

Register of Open Market Orders (Form 8)

This record is operated to show the total amount of open market orders issued each month. The columnar register

(Form 8) is provided with captions for entering the following information:

(1) Date of issue
(2) Serial number
(3) Name of vendor
(4) Description of material, supplies, or services
(5) Symbol giving the detail classification of appropriation or fund account encumbered
(6-9) Distribution of open market orders under appropriations or bond fund accounts

At the end of each month the register of open market orders is footed to provide totals showing the amount of encumbrances registered against appropriations and bond fund accounts.

Register of Miscellaneous Claims (Form 9)

This record is kept to show the numerous miscellaneous claims which encumber appropriations and bond fund authorizations each month. Its columns contain the following information:

(1) Date of registration of claim
(2) Serial number of claim
(3) Name of vendor
(4) Description of material, supplies, or services
(5) Symbol giving the detail classification of appropriations or bond funds encumbered
(6, 7) Distribution of miscellaneous claims under appropriations and special revenue bond fund accounts

Register of Obligations Incurred by Condemnation Proceedings (Form 10)

This form is kept to show the obligations incurred by

condemnation proceedings each month. Its columns contain the following information:

(1) Date of entry
(2) Number of obligation
(3) Name of claimant
(4) Description of obligation
(5) Symbol giving the detail classification of funds encumbered
(6, 7) Detail and amount of obligation

Special Reserve Accounts

The total amount of the claims which become encumbrances on appropriations and bond fund authorizations, is set up monthly as a reserve. This method of accounting prevents appropriations and bond fund authorizations from being unknowingly overdrawn. It also secures the proper accounting control over claimants.

CHAPTER VIII

VOUCHER RECORDS

Evidence Required for Audit Purposes

A definite procedure should be prescribed for those agents of the city who incur liabilities. Such procedure should not only fix definite responsibility, but also provide for obtaining the evidence required for auditing claims. Any comprehensive method of procedure for conducting a city's business should, as one of its essential features, provide for supplying the chief financial officer with properly prepared claims and vouchers as a basis for the audit of expenditures.

In order to provide such evidence, it is necessary that purchases be certified by agents having a personal knowledge of the facts. Orders should be in writing, and so definitely expressed as to preclude any possibility of questions arising as to the quality or quantity of goods delivered. Besides this, the certifications approving quality and quantity of goods purchased and received should be such as to hold the employees executing them legally responsible. Only by rigid adherence to such a system can the financial officer stop payments for short deliveries and inferior quality.

Method of Auditing Claims

The following questions should be asked with regard to each claim presented for audit:

(1) Is the subject matter of the bill under examination within the provisions of the city charter?

(2) Are proper certifications attached by the persons legally authorized to make the contract or incur the expenditure?
(3) Is the unencumbered balance of the appropriation sufficient to meet the obligation?
(4) Are quantities, weights, and measurements properly stated, and is there proof of delivery?
(5) Does the price charged correspond with the market price?
(6) Has the prescribed form been used?
(7) If the bill is for partial deliveries on a contract, does it state properly the particulars of the sum previously paid, amount of work not yet completed, and the per cent remaining to be performed or delivered?

Unless all the above questions can be satisfactorily answered, the claim should not be regarded in proper form for payment.

Procedure Followed

The procedure to be followed from the time a request for purchase is made up to the time a claim is audited, must cover each step of the transaction so fully as to prevent the allowance of an improper claim. All expenditures made by a city, except those for personal service, should be requested in writing. When the information called for on the request for purchase is given, it is impossible for the purchasing agent, save by the grossest carelessness, to issue a purchase order unintelligently. When a purchase order system is properly operated the danger of passing upon claims without sufficient evidence is effectually safeguarded.

Certificates on Purchase Order

In order to fix responsibility definitely on the persons

who prepare purchase orders and who pass upon articles received, two certificates are attached to the purchase order (Forms 4-6) as follows:

(1) "Certificates of the necessity of the above supplies and of the sufficiency of the appropriation therefor were placed on file in this department before the expenditure was incurred."

(2) "I hereby certify that the articles above specified have been received and that the quantity and quality thereof have been verified, with the exceptions noted."

The first certificate is to be signed by the person preparing the purchase order, and the second by the person who receives and inspects the goods.

The original purchase order sent to the vendor bears this request: "This original order must be returned by vendor with the goods." This is a necessary part of the procedure for handling purchases, because it is upon the original copy of the purchase order that the inspector certifies as to quality and quantity of goods delivered.

Record of Contract Orders (Form 11)

In order to show the individual orders and deliveries on each line of a contract, a "Record of Contract Orders" is maintained. Full particulars regarding the article contracted for are entered on the upper part of the record. As goods are delivered entries are made in the record of contract orders in such a manner as to show the balance of the contract still remaining available for further orders.

Record of Open Market Orders (Form 12)

A complete history of open market orders issued is provided for on Form 12. The name or description of the article ordered is entered at the top of the form. Informa-

tion pertaining to the order is entered on the left, and on the right are entered the facts relating to the liquidation of the order. One feature of this form is the column which provides for noting any adjustments which have to be made between the invoice as received and the voucher as paid.

Invoices

The invoice is an itemized statement of material or supplies furnished by a vendor or by any one who has undertaken some service for the city. This invoice is used as a basis for settling claims, and should be rejected unless properly made out. Vendors should be required to send four copies of the invoice containing a clear description of goods delivered or services rendered, date, purchase order number, price, and amount for which claim is made.

Voucher Stamp (Form 13)

A voucher stamp can be used, if desired, to facilitate the proper approval of invoices. When all the information called for on the voucher stamp is filled in, the invoice becomes a voucher, because agents or officers of a city having knowledge of the facts have certified to its correctness.

Register of Vouchers (Forms 14-17)

The titles of these voucher registers are as follows:

Appropriations (Form 14)
Special Revenue Bond Funds (Form 15)
Capital Fund (Form 16)
Special and Trust Funds (Form 17)

These registers show the total amount of appropriation and bond fund vouchers passed each month. Their columns provide for the following information regarding each voucher:

(1) Date of passing

(2) Serial number
(3) Name of vendor
(4) Description of material, supplies, or services
(5) Symbol giving detail classification of appropriations or bond funds encumbered
(6-9) Distribution of vouchers according to claims

At the end of each month the registers should be footed. The monthly footings and recapitulations provide the necessary information for journal entries setting up the city's liability on account of vouchers payable out of appropriations and bond funds.

Register of Vouchers—Sinking Funds (Form 18)

This form records the total amount of securities purchased each month for sinking funds. The register is operated in the same manner as Forms 14-17, except that the distribution of totals is made under two captions only, which provide for dividing the purchase price of securities between the principal and premiums. The monthly footings of this register give the information necessary for a journal entry setting up the liability on sinking fund vouchers.

CHAPTER IX

PAY-ROLLS

Nature of Pay-Rolls

Pay-rolls are the basis for the disbursement of salaries and wages to the employees of the city. Forms for pay-rolls must conform with any conditions peculiar to a city's business methods, and the accounting procedure followed in their preparation must be in accord with the legal requirements.

An exact record must be kept of the working time of employees, as this information is required in making up pay-rolls. Salaries and wages must be so described as to show out of which particular appropriation or bond fund account they are to be paid. The pay-rolls and their preparation must be under complete accounting control, because they are the basis for the disbursement of large sums of money, and proper certifications must be attached so that responsibility may be definitely fixed.

A satisfactory pay-roll system should furnish the basis for the distribution of labor costs, for cost accounting and statistical purposes, and should be operated in connection with double entry bookkeeping records.

Elective Officers

One result of the rapid growth of our cities is that only a small proportion of the city officials are chosen directly by the people, the rest being employed or appointed by these elective officers. The elective officers are expected to con-

duct public business in a manner pleasing to the voters, and failing in this may not be re-elected. The elective officers are generally provided for in the city charter, and their duties, salaries, and successors are specified. It is frequently provided that no city official can draw more than the salary of the position to which he was elected, no matter what services he may render.

The Merit System

In a number of cities a merit system prevails, and civil service rules and regulations are established by law. City employees are then divided into the classified and unclassified service, the latter class comprising all elective officers, and the former all others.

The classified service comprises all positions to which the merit system has been applied. All appointments to such positions, except those of veterans, are for a probationary term. They are divided into four classes: exempt, competitive, non-competitive, and labor.

(1) The exempt positions include the deputies of the principal executive officers, authorized by law to act in the place of their principals; the secretaries of such officers, boards, and commissions as are authorized by law to appoint secretaries, and the clerk and deputy clerk of each court and elective judicial officer, if such are legally authorized.

(2) The competitive class includes all those positions which are filled through competitive examinations conducted by the municipal civil service commission; the applicants graded highest in the examinations receive the first appointments. A period of eligibility, not less than one year nor more than four, is fixed for each list of successful candidates, and any vacancy is filled by appointment from the most appropriate eligible list, new lists being created only when no appropriate list exists.

The municipal civil service commission requires that at a reasonable time before the date of examination intending competitors shall file at its office formal applications in which the applicants state under oath:

(a) Full name, residence, and office address
(b) Age and the place and date of birth
(c) Health and physical fitness
(d) Right of preference on account of military or civil service
(e) Business or employment and residence, for the previous five years
(f) Other information deemed necessary

Civil service positions may be filled without examination when there is no appropriate eligible list, or when it is impossible to hold the position open. A departmental officer nominates some suitable person, who must pass a non-competitive examination before the municipal commission, and may then be appointed provisionally to fill the vacancy. Vacancies in the competitive class are, however, usually filled by promoting persons holding lower-grade positions. Such promotions are based on merit as shown by length and character of service.

(3) The non-competitive class of positions includes those which are neither in the labor class nor in the exempt class, and which it is not practicable to include in the competitive class. Candidates for such appointments must pass a non-competitive examination.

(4) The labor class consists of unskilled labor, and of such skilled labor as is not included in any of the other three classes. The municipal commission keeps separate lists of applicants for the different kinds of labor, and vacancies are filled from these lists according to date of application.

Budget Restrictions

When budget items are properly segregated, it is possible to fix definitely the number of employees which should be allowed for each department, and this number is shown on a separate schedule. In this way departmental heads are prevented from spending too much for personal service. A distinction is made in the schedule between salaries and wages, the employees on a salary schedule being figured at a yearly rate, while those on the wage schedule are paid on a per diem basis. A distinction is also made between the regular and temporary employees of each class. No one can be employed on either a salary or wage basis unless such personal service is provided by the budget appropriations and schedules in the budget, because there would be no fund against which to charge his pay.

Employee's Record Card (Form 19)

Applicants whose names have been certified for positions are referred to the department where their services are required. Before entering on his duties the appointee is usually required to give certain information regarding himself, which is entered on the employee's record card (Form 19). These cards are filed alphabetically among the department records so as to be readily available when needed.

Record of Clock Numbers (Form 20)

Whenever employees report regularly for work at any particular station, a time clock is a convenient method for recording their time of arrival and departure. A number is assigned to each employee, who rings his time at a station. In order to assign numbers systematically, a form record of clock numbers should be kept, which shows not only the number assigned to each employee, but serves also to indicate any unused clock numbers. When the plan is first put in

operation, Number 1 on the clock is assigned to the first man, Number 2 to the second, etc.; the cards are removed from the file and the employees' names written on them. The number and the card are then his as long as he stays in the department. When he is transferred, or leaves the employ of the city, the fact is noted on his card, and the number is then open for reassignment. The clock number cards when filed numerically act as a cross index to the employees' record cards, if these latter are filed alphabetically.

Monthly Clock Card (Form 21)

The monthly clock card is used by city employees for ringing their time "in" and "out." In the upper part of the card, space is provided for the month, and the employee's name and number; the lower portion contains spaces for the time registered. The first sixteen days of the month are registered on the left-hand side of the card and the remaining days on the right-hand side. At the close of the month the employee's attendance record is written at the foot of the card, and an explanation of any irregularity in attendance is written on the back.

Daily Time Report (Form 22)

When it is not possible for all employees to report for work at the point where a time clock is kept, daily time records must be used to note their times of arrival and departure. In the upper portion of the record, the employee fills in his name, title of position or civil service title, and the date. The times of beginning and stopping work are entered in the A. M. columns for the morning, and in the P. M. columns for the afternoon. Provision is made for reporting the hours on duty and the hours excused. The employee also writes a description of the kind and location of the work done, together with the symbol—if there is one —of the account to which the work is chargeable.

Timekeeper's Record Book

Where the employees are widely scattered, as is the case when engaged on repair and construction work, it is necessary to have a timekeeper visit them frequently so that he can certify to the correctness of their time reports. While making his rounds the timekeeper carries a small book ruled for entering the names of employees and their attendance record. The form is simple, but it is a valuable aid to the timekeeper when he is asked to certify to the correctness of time reports and pay-rolls.

Distribution Time Sheet (Form 23)

It frequently happens that mechanics and laborers are engaged part of the time on construction work, which is payable from the proceeds of construction bonds, and part of the time on maintenance work, which is provided for in the budget. In order to make up pay-rolls for employees who are paid out of both the appropriations and bond funds, their time must be distributed. For this purpose a columnar sheet (Form 23) is used each month for every such employee. The employee's name is written on the upper part of this distribution time sheet, and the code numbers of accounts to which time is chargeable are entered at the heads of the various columns. One line is used for each day, and the time chargeable to each account is entered in its proper column. The distribution of the employee's time for the month against appropriation and bond fund accounts is obtained by footing the columns.

Pay-Roll Analysis (Form 24)

For classifying the time reported by individual employees as against the appropriation and bond fund accounts, an analysis sheet is employed. The employees' names are written on the left and the names or code numbers of the appropriation or bond fund accounts are used as headings

for the columns of the analysis sheet. The monthly column footings of the distribution time sheet (Form 23) are entered against the name of the individual to whom the sheet belongs. The footings of the sheet give the totals chargeable against each appropriation or bond fund account classification. By means of cross addition, the total amount earned is obtained. This use of an analysis sheet is the easiest method for splitting a pay-roll among several accounts.

Straight Pay-Roll (Form 25)

Where employees are engaged constantly on the same line of work, there is no change in the pay-rolls from month to month. The method of preparing such "straight" pay-rolls is to note on a carbon copy of the previous roll any changes to be made and then typewrite them into the new one.

Split Pay-Roll (Form 26)

When the time of an employee is chargeable to more than one budget schedule line or bond fund account, or to both such accounts, a so-called split pay-roll must be used. This form is provided with columns for distributing the amount due an employee against as many accounts as are required for a proper division of his time.

Pension Fund Deductions

Provision is frequently made for deducting a certain percentage of each employee's salary in order to maintain a pension fund. Whenever such deductions are made on pay-rolls, two additional columns are required to show the amount deducted and the net amount of the pay-roll. The percentages most frequently deducted are 1%, 2%, or 3%, higher rates seldom being used, as there are usually other sources of income for pension funds.

Pension fund deductions are most commonly found on the pay-rolls of the educational, police, and fire departments. Contributions to the pension funds of a city as well as disbursements from it, are regulated by law.

Pension Fund Pay-Rolls

The method of turning over the contribution to the custodian of the pension fund is to prepare a pension fund pay-roll which contains either the names of the employees contributing, or a reference to the pay-rolls in which appear the names of the beneficiaries, together with the amount of the contribution. The pay-roll is made payable to the custodian of the pension fund and the aggregate amount of the various contributions made by all the employees is paid into the fund by a paymaster's check. There are, of course, as many pension fund pay-rolls as there are pension funds.

There are certain provisions of law respecting the beneficiaries of a pension fund. Length of service, old age, and injuries sustained in the performance of duty, are some of the things which enable a person to become eligible to retirement under most of the pension fund systems. At the close of each month or at the time specified in the pension law, the custodian prepares the pensioners' pay-roll, which contains the names of those who are entitled to benefits from the pension fund together with the amount due. Provision is frequently made on the pay-rolls for the pensioner to receipt for his pension. Out-of-town pensioners can be instructed to draw on the custodian of the pension fund through the bank.

Rate Table

The following table showing the daily earnings of employees on a monthly salary will be found convenient for the pay-roll clerk:

Monthly Salary	Rate Table of Daily Earnings Based on the Number of Working Days			
	28 days	29 days	30 days	31 days
$30.00	$1.07	$1.03	$1.00	$ .97
40.00	1.43	1.38	1.33	1.29
50.00	1.78	1.71	1.67	1.61
60.00	2.14	2.07	2.00	1.94
70.00	2.50	2.41	2.33	2.26
80.00	2.86	2.76	2.66	2.58
etc., etc.				

Where employees begin work at irregular periods, it is an easy matter to figure their salaries for the broken period by referring to the rate table and extending the daily rate by the number of days worked.

Recapitulation of Pay-Rolls (Form 27)

In order to assemble the monthly amounts chargeable in any department to the various appropriations or bond fund accounts, it is necessary to recapitulate the pay-rolls of that department. The method of preparing such recapitulation is shown on Form 27, where the name of the department and the month appear at the top of each column and the titles of appropriation and bond fund accounts are listed down the left-hand side. The total amounts chargeable against each account classification can be arrived at by cross addition. Information of value in judging whether an appropriation or bond fund account is in danger of being overdrawn is arranged for in the right-hand columns of the pay-roll recapitulation sheet, as follows:

(9) Pro rata allowances for current period from appropriation and bond fund accounts.

(10) Allotment for the period covered by pay-rolls to date. Thus, if the pay-roll period is for a month, one-twelfth of the annual allowance would be shown as the allotment.

(11) Shows the total amount expended for pay-rolls from the first of the year up to and including current pay-roll.

(12) Total amount allowed for the current year.

By referring at any time to the recapitulation the probability of overdrawing allowances for pay-rolls can be readily determined.

Record of Salaries Expended, and Unexpended Balances (Form 28)

Under a well devised and well regulated budget, salary expenditures for regular employees in any particular month should not exceed one-twelfth of the yearly salary allowance. In case the salaries for any particular month do not consume the entire pro rata allowance, the unexpended balance is not available for another month, but goes back to the current fund, where it ultimately operates to reduce taxation. The method of arriving at the amount expended on salaries and the unexpended balances is illustrated in Form 28. Opposite each budget schedule line are entered for each month the amounts expended which are chargeable against that line, as well as any balance remaining above the appropriation allowed in the budget. By footing the unexpended balance columns on all the forms each month, it is possible to find the amount (if any) accruing to the current fund from unused salary appropriations.

Record of Wages Expended Against Budget Schedule Lines (Form 29)

Properly arranged budget schedule lines for wages show the number of days allowed, and the per diem rate. In this case the days of employment and the per diem rate must be taken into consideration when arriving at the balances still available for wages. A convenient card for such calculations

is shown in Form 29. Above the column headings the budget schedule line is written, as shown over the left-hand column heading. The whole number of days allowed may be consumed in one month, or it may be spread over the entire year, as the necessities of the department demand. The one requirement of a well administered budget is that the allowance be not exceeded. At the end of the period covered by the allowance any unencumbered balance goes into the current fund.

Certifications to Pay-Rolls

The last sheet of a pay-roll should be certified by the person who prepares it, as follows:

(1) This pay-roll is correct and the charges to appropriation and bond fund accounts are properly classified.

(2) The time of persons paid a daily or weekly rate has been duly approved by those having knowledge of the facts.

(3) The division of the time of any employee whose wages are chargeable to more than one account classification is in accordance with properly kept records.

The head of a department must also certify that:

(1) The pay-rolls are correct to the best of his knowledge.

(2) The persons named, except those holding executive positions, were promoted in accordance with the civil service rules.

(3) Any overtime allowed on the pay-roll is in conformity with the provisions of the law.

The auditor of accounts also certifies that:

(1) The amounts chargeable to appropriations or specific fund accounts are correct.

(2) The proper evidence is set forth to justify the settlement of the pay-roll as audited.

Certifications to Pay-Roll Recapitulations

Each pay-roll recapitulation should be provided with such certifications as will enable the auditor to certify that:

(1) The amounts shown in the recapitulation of pay-rolls are proper charges against the account classifications shown.

(2) The amounts shown will not exceed the unexpended balances of appropriations provided by the budget.

(3) The amounts chargeable against specific fund accounts are correctly computed and recapitulated.

(4) The pay-rolls were separately audited and examined and properly certified before his own certification was attached to the recapitulation of pay-rolls.

(5) The voucher checks drawn for the settlement of the pay-rolls are correct and in accordance with the pay-rolls as audited and shown in the recapitulation.

Provisions regulating the disbursements on account of salaries and wages should be attached to the budget. Much of the accounting procedure in regard to pay-rolls is also prescribed by law.

CHAPTER X

JUDGMENTS AND MANDAMUSES

Register of Judgments and Mandamuses (Form 30)

Judgments and mandamuses are properly payable through the department of the comptroller. In order to furnish a basis for determining the liability of the city in regard to this class of claims, suitable registers must be provided and proper accounts opened in the ledger.

The register of judgments and mandamuses when properly written up provides a complete record of this class of a city's liabilities. The register should be kept by the clerk charged with the duty of drawing vouchers for judgments and mandamuses.

Procedure Followed

When the comptroller has been advised that judgments have been obtained against the city, an entry should be made in the columns of the register as follows:

(1) Day of month
(2) Number of judgment or mandamus
(3) Name
(4) Description of judgment or mandamus
(5) Symbol giving the detail classification of appropriation or bond funds encumbrance
(6-8) Distribution of judgments and mandamuses under appropriation or bond fund account classifications

The footings of the register of judgments and mandamuses provide the necessary totals for a monthly journal entry.

The basis for the book entries of judgments and mandamuses is a copy of the court proceedings. It is the custom for the law department to forward such copies to the comptroller, who can use them for filling out the records of his department, and for preparing the necessary documents for the payment of this class of claims.

Character of Charges

The nature of the charges coming under the head of judgments and mandamuses can be seen from the following list taken from the report of the comptroller of a large city:

Changes of grade
Condemnation of property for park purposes
Costs
Counsel fees
Damages
  Personal injuries
  Death of husband
  Death of son
  Personal estate
  Real and personal estate
  Barge
  Tug
  Sewers
  Tearing down dangerous buildings

The distribution of these charges would be against land, structures, other improvements, equipment, and sundry expense accounts.

CHAPTER XI

CASH PAYMENTS

The City Treasurer

In the cities of the United States, the person responsible for the safe keeping of the money is generally known as the treasurer or chamberlain. He is required to give a heavy bond for the faithful performance of his duties on account of the large amount of money intrusted to his care. It was formerly customary for city treasurers to give bonds made up by their friends and passed on by the officers of the city; but the bond of a surety company is now usually required, the charges being paid by the city.

City Depositories

Bonding companies usually insist upon a safe system for handling moneys, the general requirement being that all money received be deposited in some bank, and withdrawn only by means of properly signed checks. When a proper accounting system is operated in connection with this method of withdrawing money, it is impossible for the custodian of the city funds to steal outright without the collusion of accountants and bank officials.

The council usually selects the bank which is to be the depository for the city funds, and the bank sometimes gives a bond to indemnify the city against loss. In such a case the surety company from which the bond is obtained generally requires daily reports of the receipts, payments, and balance on hand. Sometimes city deposits are distributed

among different banks in proportion to their capital; and sometimes banks bid for the city's account, which is awarded to the one offering the highest rate of interest.

Voucher Checks (Form 31)

Payment of city funds can be made by means of voucher checks similar to those employed by business houses. On the left side of the check a ruled form is provided for entering a list of the claims settled. When checks are sent to the auditor of disbursements for his signature, they should be accompanied by the vouchers for the expenditures listed on them, except in the case of expenditures authorized by law or by ordinance, in which case reference should be made to the provision authorizing the expenditure.

Voucher checks are drawn against established funds out of which they are to be paid. In order to prevent mistakes, the funds drawn on are frequently indicated by prefixing a letter to the check number, as follows:

A—Appropriations
B—Special Revenue Bond Funds
C—Construction Funds
D—Sinking Funds
E—Special and Trust Funds

This method of using letters is a good one whenever funds are affected by the transactions of a city.

In addition to classifying voucher checks according to the funds against which they are drawn, they should be classified according to the kind of claims settled. This may be done by having the checks printed on different colored papers, something as follows:

Contract claims.....green
Open market order claims....pink
Miscellaneous claims.....blue
Pay-roll claims.....buff

When this scheme is followed a voucher check on pink paper, marked with an "A," means that an appropriation has been drawn upon, and that an open market order claim has been settled.

Register of Checks (Forms 32-36)

Appropriations (Form 32)
Special Revenue Bond Funds (Form 33)
Capital Fund (Form 34)
Sinking Fund (Form 35)
Special and Trust Funds (Form 36)

Checks as issued are registered according to the fund or appropriation against which they are drawn. The registers of checks in which these are listed may be kept in quadruplicate, if desired, to provide a list for the comptroller, mayor, chamberlain, and bookkeeping department. The duty of preparing the check registers is best delegated to the bookkeeping department, where they can be typewritten on billing machines.

CHAPTER XII

STORES CONTROL

Office of Storekeeper

The quantity of goods purchased during a fixed period is not necessarily the same as the quantity used during the same period; and one of the fundamental principles of accounting is that stores cannot be considered used until actually consumed; thus the inventory account of an active storehouse continually changes. In order, therefore, to put municipal accounts on a strict income and expenditure basis, it is necessary to place stores under complete accounting control, and not consider them consumed until actually requisitioned.

In many city departments requisitions on stores are made daily. The dietetist in a hospital makes out a daily requisition for groceries and meats. The housekeeper in an institution issues daily requisitions for cleaning supplies, wearing apparel, and household equipment. Every stable, laundry, power plant, morgue, building, and repair shop must be continually supplied with stores, and some one must assume full responsibility for looking after and issuing them only upon properly approved requisitions. Such control can be obtained only by definitely fixing responsibility on some one who can be held accountable for his stewardship; consequently, if it does not already exist, the office of storekeeper must be created.

Storehouse Organization

The proper organization of a municipal storehouse is

indispensable to its successful operation. We may take for example the storehouse of one of the larger administrative departments of New York City, which handles the stores required by several institutions, and will illustrate the proper subdivision of labor. Such a storehouse has twelve employees, besides prisoners, engaged in handling supplies, with a storekeeper and deputy storekeeper in charge. The storekeeper exercises general supervision over the purchasing, receiving, storing, and distributing of all supplies, while the deputy keeps the file of advices of goods ordered, attends to orders issued by the storehouse for prison-made bread and clothing, prepares certificates to the correctness of vendors' bills, and relieves the storekeeper of his routine duties as much as possible. There are three employees in the office known as the stores ledger clerk, the entry clerk, and the stenographer. The stock is divided into five parts, known as (1) fresh vegetables, (2) meats, (3) groceries, (4) dry-goods (including crockery and enameled ware), and (5) oils, paints, and varnishes. A stock clerk looks after each division—except the meats, which are in charge of a butcher —and all five report to the storekeeper. The meats are prepared by prisoners, under the supervision of the butcher, who acts as their keeper, thus saving the expense of paid helpers. There are also two prisoners engaged as packers in the storehouse. An orderly runs errands between the different institutions, and a watchman is assigned to duty at the storehouse. The details of storehouse organization in the different city departments are of course controlled to a great extent by local conditions.

Arrangement of Stores

The municipal storehouse should be so located that the storekeeper may conveniently handle and care for his stock. It should be within easy reach of incoming deliveries, and

within easy access of the points to which deliveries are to be made. The building should be well lighted, heated, and ventilated. An overheated storeroom is as bad as a cold one. Either condition is uncomfortable for the storekeeper, and damaging to such classes of stores as are affected by extremes of temperature. Each class of supplies should be handled according to the method of storage particularly suited to it. Industrial railways, racks, bins, boxes, and wall spaces can all be utilized. When a convenient and satisfactory arrangement has once been adopted it should be insisted upon, and not changed unless for good reason.

Storekeeper's Advice of Goods Ordered (Form 5)

The storekeeper's advice of goods ordered is an essential part of a complete stores system. This is the third copy of the purchase order made out by the purchasing agent. The information contained on the storekeeper's notification is the same as that on the original copy of the order sent the vendor; but in addition space is provided at the foot of the form for recording the date when the goods are received, the date the invoice is received, the date on which the quantity and quality of the goods are verified, and the date when the invoice is sent to the central office. The storekeeper's advice of goods ordered, when properly filled out, contains complete information regarding an order, from the time it is issued until the invoice is transmitted to the central office. This record is kept in a binder filed according to order numbers.

The original purchase order sent to the vendor contains the direction—"Put purchase order number on all packages and invoices"; and when this direction is followed, the storekeeper can readily identify goods as they are received. The order number enables him to turn at once to his file of advices of goods ordered, and to locate the order which con-

tains a description of the goods. The date when goods are received is then noted on this order, so that in case of a dispute the time will be a matter of record.

The purchase order number also enables the storekeeper readily to identify invoices when they are received. Generally the vendor sends in four copies of the invoice. When these are received, the storekeeper's advice of goods ordered is referred to and a record made thereon of the date, so that there shall be no doubt as to the time when the invoices were received.

The fourth copy of the vendor's quadruplicate invoice is that used by the storekeeper for checking up the goods received. He counts, measures, or weighs them in order to ascertain if the quantity billed is received. If quantities are correct, he checks the various items on the advice of goods ordered, and holds them for inspection as to quality.

When purchases are made in accordance with certain specifications, or with the understanding that goods shall be as per sample submitted, it is necessary that the goods be inspected to see if the quality is in accordance with the specifications. It is the duty of the inspector carefully to examine the specifications and samples, accepting and rejecting as goods meet or fail to meet the requirements. The inspector must report the goods accepted and also any goods rejected. Provision is made at the foot of the storekeeper's advice of goods received for entering the date when the inspector verified the quality. If the inspector finds the quality unsatisfactory, the goods are rejected and are not put in stock or entered upon the stores ledger.

Memorandum Invoices

In case the vendor fails to provide an invoice when sending goods, a memorandum invoice must be made at the storehouse. This must also be done when partial deliveries are

made upon an order and a vendor's invoice cannot be forwarded to the central office as evidence of goods received. Any action taken by the storekeeper in regard to such goods should be entered on his advice of goods ordered (Form 5). When the vendor's invoice is received, the items for which memorandum invoices have been made can be noted on it. The storekeeper should, of course, make use of memorandum invoices only when necessary.

Stores Ledger (Form 37)

The invoices in a properly organized system of stores control go to the bookkeepers, to be checked and entered upon the stores ledger. As soon as the extensions and footings have been examined, the invoices are arranged as nearly as possible in the order in which the items appear in the stores ledger. The following arrangement is offered as the logical one for the stores in an institution such as a hospital:

Bread, dairy products, and green groceries
Meats and fish
Groceries
Wearing apparel
Cleaning supplies and equipment
Agate and enameled ware
Nickel and silverware
China, crockery, and glassware
Dry-goods, bedding, and notions
Repair materials

The date, order number, quantity, unit cost, and amount are entered on the stores ledger under the caption "Received." Less space is provided for receipts than for disbursements because the "issued" columns generally fill up faster than the "received" columns. In addition to showing the stores actually received, provision is made on the stores ledger, as shown, for a record of goods ordered.

Working Desk

The most convenient method for handling a large quantity of stores ledger cards is to arrange them with guide cards in a working desk provided with sunken card trays. The advantage of the card system over the loose-leaf ledger for a stores record consists in the speed and ease with which new accounts are opened and inactive ones transferred. It is less trouble to use a card file than a loose-leaf book, and by properly operating a stores ledger in a working desk results can be obtained which are not otherwise possible.

Rejected Goods Records

All goods delivered to a city storehouse by a vendor are accepted subject to inspection; but it is quite customary for drivers to take a receipt for delivery. In case the vendor is notified that goods are unsatisfactory, he sends some one to call for the rejected goods; and before releasing them the storekeeper should obtain a receipt from this person. These receipts should be pasted in a book and indexed for reference, so that if at any time a vendor claims delivery of rejected goods, his driver's receipt can be shown as evidence of their return. It will thus be impossible for such a vendor to persuade an unsuspecting auditor to pay bills containing open items for rejected goods which have not been credited.

Requisitions on Storekeeper (Forms 38-42)

When supplies, equipment, or materials are to be taken from the storeroom, a requisition should be made out, properly approved, and then turned in to the storekeeper. The party or parties to approve these requisitions should be in authority in the particular department or institution. The routine of requisitions varies as to detail in the different departments. That of a city institution such as a hospital is

typical. Here the requisitions are made out by the dietetist, matron, supervising nurse, or foreman of laborers; and they must then be approved by either the resident physician or the superintendent of hospitals.

Meat is supplied according to specifications, the amount required for each day being determined by the dietetist the day before and transmitted to the contracting butcher by telephone or by memorandum. This meat is delivered to the institutional butcher shop or storeroom. The dietetist of a hospital ordinarily calls at the butcher shop each morning, gives the order, and directs how the meat shall be cut for delivery to the various kitchens. The butcher weighs the meat before trimming it and makes a record of the weights chargeable to the doctors', nurses,' help's, and patients' kitchens. The butcher's records are summarized at the end of the month, and a requisition (Form 38) to cover meats delivered to the various kitchens is then prepared. The "fores" and "hinds" of beef and lamb are each divided into three classes of cuts as shown. The average census, or number to be fed, is recorded in the space provided in the upper portion of the requisition, as shown in Form 38, for confirmation by the resident physician.

It is customary for the dietetist or the steward of an institution to prepare daily requisitions for bread, dairy products, and groceries. The requisitions used are shown in Forms 39 and 40. The list at the left of Form 39 shows the bread, dairy products, and green groceries generally requisitioned. The list on Form 40 shows the other items of groceries carried in stock. The items most frequently called for are printed on the form to save time in the preparation of the daily requisitions.

In addition to the foregoing requisitions, another form (Form 41) is required for cleaning supplies and equipment, agate and enameled ware, nickel and silverware, china,

crockery and glassware, dry-goods, bedding, notions, and wearing apparel.

The requisition form used for drawing repair materials from stores is similar to those shown except that the space for the list is left blank for filling in the items wanted, as shown on Form 42.

Requisitions for equipment should be accompanied by the condemned equipment which is to be replaced, or else by an explanation of the reason for an increase in the inventory of equipment.

Requisitions Used by Penal Institutions

The requirements shown in Chapter XXXIV refer to the different kitchens under the names by which they are known in hospitals. The same forms will serve for penitentiaries, workhouses, reformatories, and city prisons, merely by changing the names of the kitchens. Deliveries of stores for employees and prisoners of penal institutions are made at the kitchens of the warden, or deputy warden, keepers, and prisoners. The four columns of the hospital requisition form will therefore suffice, and only the headings need be changed.

Table of Food Allowances

For controlling the issue of food supplies to an institution, a table of food allowances is frequently made. The quantity of each article allowed during a given period is fixed by the dietetic expert; and knowing the allowance determined upon for a certain number of patients or inmates, a proportionate allowance may be issued for any number.

The items in the table of food allowances depend of course upon the kind of institution. In a tuberculosis hospital the patients are fed with the most nourishing foodstuffs, in such variety as may induce them to eat as much

as possible. In a prison, however, the inmates are not sick, and require food only of the ordinary quantity and variety.

A diet is measured by the number of calories it contains. (One calorie is the amount of heat sufficient to raise the temperature of one gram of water 1° centigrade.) The more expensive diets used in tuberculosis hospitals contain about 4,000 calories as the daily allowance of one individual, while those used in a city home usually contain from 2,200 to 2,500 calories.

The various classes of officers and inmates in an institution receive different allowances. For instance, the warden or deputy warden in a penitentiary receives a more expensive allowance than the general employees, whose table of allowances is shown below; and convicts sentenced to hard labor receive a larger meat allowance than prisoners at light labor. The food allowances determined upon obviously affect the per capita cost.

In a certain penitentiary prisoners are allowed 14 ounces of beef, mutton, or veal daily—except on Fridays, when fish is provided—together with an additional allowance of ten ounces of hashed meat twice a week, chicken being served at Thanksgiving and Christmas. When oysters are substituted for fish, fifty oysters are dispensed as the equivalent of eight to ten pounds of fish. The store butcher is furnished with this menu, and each day he extends the quantity allowed one person by the number of persons entitled to meals, making deliveries accordingly. The following table shows the groceries allowed monthly for eight prison employees: .

MONTHLY TABLE OF ALLOWANCES FOR EMPLOYEES

(On basis of eight persons)

8	lbs.	barley	16	lbs.	ham
30	"	butter	1 4/12	doz.	lemons
3/12	doz.	baking-powder	16	lbs.	oatmeal
8	lbs.	crackers	8	"	prunes
3/12	doz.	catsup	4	"	rice
3/12	"	chow-chow	2	"	raisins
2	lbs.	currants	17	"	rock salt
8	lbs.	cheese	2/12	doz.	Worcestershire sauce
12	"	coffee	4	lbs.	sugar
2/12	doz.	extract of lemon	56	"	granulated sugar
2/12	"	extract of vanilla	1/12	doz.	soap (ivory)
20	"	eggs	6	lbs.	tea
2/12	"	gelatine			

Other tables are prepared to show the daily allowances for fresh meats, poultry, fish, fruits, and vegetables.

Checking Stores Requisitions

When a table of allowances has once been established, the storekeeper must check all requisitions for food supplies accordingly so as to prevent over-ordering. The daily census is first obtained by telephone, and then the allowances on the dietetic table are extended and compared with the quantities requisitioned, and the latter, if necessary, are cut down to equal the allowance. The census as reported by telephone is later certified by the head of the institution. In a penitentiary the prisoners are counted at the morning line-up, and the count entered on a blackboard in the warden's office, from which the daily census is obtained.

As soon as the storekeeper, or his assistant, has checked

the requisitions, he must make out delivery tags to identify the goods intended for different institutions.

After the packers have assembled the goods in convenient packages, these must be checked back with the requisitions in order to discover any mistakes. Usually the packer calls back to the storekeeper the articles laid out, while the latter checks the requisition. As one package after another is called off and found correct, it is put into a convenient basket or truck for delivery.

Receipt Vouchers

Receipt vouchers are usually prepared by the storekeeper and sent out with the goods, to be checked and signed by the person receiving them. They may consist of separate slips of paper, or be bound in a small book. If books are used for a penitentiary, a separate one must be kept for the kitchens of the warden, deputy warden, keepers, and prisoners; in the case of a hospital, a separate book is kept for the kitchens of the doctors, nurses, help, and patients.

Stores Due Book

It frequently happens that supplies requisitioned are not in stock. It is then necessary to cross off such items on the requisition, and enter them in the stores due book, which is consulted by the storekeeper when preparing a request for purchase. When the supplies are received, he adds them to the next package of goods delivered to the institution which ordered them originally. A record should then be made in the stores due book, showing the action taken.

Distribution Sheet of Stores (Form 43)

So many supplies are delivered daily by a city storehouse that it is desirable to have a special form to show their distribution. A convenient sheet for summarizing stores is shown in Form 43. It is columnar in form and resembles

the Boston ledger used by banks for keeping customers accounts. The days of the month run across the upper portion of the distribution sheet, and the left side carries the names of the stores kept in stock. The vertical columns provide for entering the items requisitioned daily. At any time the quantity requisitioned to date can be determined by cross addition.

In an institution such as a municipal hospital, separate distribution sheets can be used, showing the daily expenditures for the following nineteen activities:

Administration
- (1) Executive
- (2) Audit and accounts
- (3) Purchase and storage
- (4) Engineering supervision

Professional Care
- (5) Wards
- (6) Pharmacy
- (7) Laboratory

Kitchens and Dining Rooms
- (8) Doctors
- (9) Nurses
- (10) Help
- (11) Patients

Departmental
- (12) Housekeeping and dormitories
- (13) Laundry
- (14) Ice plant
- (15) Morgue
- (16) Stable and ambulance service
- (17) Light, heat, and power

Maintenance of House and Property
- (18) Buildings
- (19) Grounds

At the end of each month, when the distribution sheets are cross-added, the total quantities are proved and entered on the stores ledger.

Distribution Entered on Stores Ledger

The arrangement of the stores items on the distribution sheets is alphabetical, and therefore the order agrees with that of the cards comprising the stores ledger—an arrangement which greatly expedites the work of posting the stores distributed each month. The quantity of an article requisitioned during the month is posted from the distribution sheet to the issued column of the proper ledger card, and is then extended at the cost price. The total amount of this cost is then entered on both the stores ledger card and on the distribution sheet. This process is continued until all he articles distributed during the month have been entered on the stores ledger and extended, after which the amount columns on the distribution sheets are footed.

Units of Measure

It is necessary to use many different units of measure when operating a complete stores system. Provision is made in the upper portion of the stores ledger for entering whatever unit of measure is decided upon. Any entries of stores must be made in the proper unit in order readily to handle receipts and deliveries.

The metric decimal system is a better measure for drugs than apothecaries' measure. All quantities should be reduced to cubic centimeters. It is much more convenient to have one such unit of measure than to use drachms, ounces, pints, and gallons. In reducing apothecaries' fluid measure to the metric system 1,000 cubic centimeters (grams) are taken as the equivalent of 33 ounces, 390½ minims.

Method for Handling Broken Dozens

Some articles are purchased by the dozen and delivered

in broken dozen lots. When this is the case fractions of a dozen are entered as follows:

1/12	dozen	enter	as	.01
1/6	"	"	"	.02
1/4	"	"	"	.03
1/3	"	"	"	.04
5/12	"	"	"	.05
1/2	"	"	"	.06
7/12	"	"	"	.07
2/3	"	"	"	.08
3/4	"	"	"	.09
5/6	"	"	"	.10
11/12	"	"	"	.11
1	"	"	"	1.00
				6.06

This method is followed in order to make the work of adding the columns an easy matter. The quantities to the right of the decimal point are first added, and then the whole dozens are carried forward and added to the numbers to the left of the decimal point. For example, if it is desired to add the foregoing column of broken dozens, the quantities to the right of the decimal point are found to amount to 66, or 5 dozens and 6 over. The whole dozens added to the quantity at the left of the decimal point gives 6 whole dozens, making 6½ dozens in all, which is written as 6.06, meaning, of course, 6 6/12.

Decimal Equivalents of Common Fractions

Whenever articles are purchased by the dozen and delivered in broken dozen lots there arises the problem of how to price deliveries, the price appearing in the stores ledger being the cost per dozen. The most convenient method to

pursue when a broken lot is to be priced is to make use of a table of decimal equivalents such as the following:

DECIMAL EQUIVALENTS OF COMMON FRACTIONS

1/16						.0625
	1/12					.0833
2/16		1/8				.125
	2/12		1/6			.1667
3/16						.1875
4/16	3/12	2/8		1/4		.25
5/16						.3125
	4/12		2/6		1/3	.3333
6/16		3/8				.375
	5/12					.4167
7/16						.4375
8/16	6/12	4/8	3/6	2/4		.5
9/16						.5625
	7/12					.5833
10/16		5/8				.625
	8/12		4/6		2/3	.6667
11/16						.6875
12/16	9/12	6/8		3/4		.75
13/16						.8125
	10/12		5/6			.8333
14/16		7/8				.875
	11/12					.9167
15/16						.9375

Suppose it is desired to extend 7 7/12 dozens at $.25. The table is first consulted to find the decimal equivalent of 7/12, which is seen to be .5833. This with the whole number prefixed gives 7.5833, which multiplied into $.25 gives $1.895825 as the product, or $1.90 when rounded off after the second place of decimals. The table of decimal equivalents is also useful for reducing ounces to the decimal part

of a pound; and generally, wherever it is possible to do so, it is more convenient to use decimals than common fractions.

Pricing Stores

Where stores vary in price it is advisable to assume that the stores received first are those first distributed. This obviates the necessity for averaging prices. The receipts and disbursements on the stock record then appear as follows:

Stores Received			Stores Disbursed		
Quantity	Price	Amount	Quantity	Price	Amount
a-400	$.055	$22.00	a-100	$.055	$5.50
b-500	.062	31.00	a-200	.055	11.00
			a-100	.055	5.50
			b-300	.062	18.60

The first lot of stores received is designated in the above exhibit as "a" and the second lot as "b." The first and second deliveries are assumed to be from lot "a," which leaves a balance remaining in that lot of 100. The third delivery calls for 400, and so 100 are taken from lot "a" in order to use up the balance remaining in that lot, after which lot "b" must be drawn on for 300 in order to make up the 400 required. The quantities taken from lot "a" are extended at $.055, and those from lot "b" at $.062. The balance remaining on hand is 200, which must be a part of lot "b," since all of lot "a" has been delivered, as shown by the check marks.

The price to use for the balance is that of lot "b," which is $.062. The balance of 200 multiplied into $.062 gives $12.40, which, added to the amounts entered on the disbursed side of the stores account, gives $53.00. This equals the total on the received side, and balances the account.

Cuts of Meat

In an institution having kitchens and dining rooms it is the general practice to purchase fores and hinds of beef. The better cuts of meat go to the executives and the poorer ones to the help and inmates. In order to make a proper charge to the different kitchens an arbitrary price must be established for the following cuts:

- Beef
  - Fores
    - Ribs
    - Chuck
    - Naval, brisket, soup and stew
  - Hinds
    - Porterhouse and sirloin steaks
    - Top sirloin, top and bottom round
    - Soup and stew
- Lamb
  - Legs
  - Chops
  - Soup and stew

The first step is to cut up some of the meat and weigh the different classes of cuts obtained. For example, it may be found that fores run as follows:

Fores	Ribs	20%
	Chuck	25%
	Navel, brisket, soup and stew	55%

When this is done the market price of the various cuts may be used as a guide in proportioning the contract price among them. When the various cuts are extended at the arbitrary prices adopted, the result obtained should be the same as that obtained by extending the total beef or lamb at the contract price. If proper care is used in determining the prices, the errors in the meat accounts for an entire year will not be more than two per cent.

Recapitulation of Stores

It is necessary to prepare a monthly statement of stores disbursed in order to make charges to the proper accounts on the general books of the city. The information required for the preparation of this statement is obtained from the "Distribution Sheet of Stores," Form 43, one of which is used for each organization unit withdrawing stores. The form for a recapitulation of stores is illustrated by the following partial report of stores issued by a hospital. Under each of the main functions, or divisions, appear the classes of stores issued.

REPORT OF STORES ISSUED FROM THE STOREROOM AT THE HOSPITAL FOR CONTAGIOUS DISEASES

Executive
- Office supplies
- Office equipment

Purchase and Storage of Supplies
- Office supplies
- General plant supplies
- Wearing apparel
- General plant equipment
- Waste, breakage, and leakage

Wards
- Cleaning and disinfecting supplies
- Medical and surgical supplies
- Fuel supplies
- General plant supplies
- Wearing apparel
- Household equipment
- Medical and surgical equipment
- General plant equipment
- etc., etc.

Statement of Equipment Condemned

When a public building or institution is first opened it is usually completely equipped for operation; but additional equipment is soon needed. A matron requires household equipment, a janitor, cleaning equipment, and so on. If this equipment were given out indiscriminately it would lead to waste and carelessness; and it is usual to require that the condemned equipment be turned in before new is given out to replace it. A record of the equipment condemned is made on the requisition for new equipment. If none is condemned, the reason for an increase in the inventory must of course be given, sufficient cause being shown to justify the superintendent or his assistant in approving the requisition. Equipment which is given out to replace that which has been condemned is chargeable to expense, and that which goes to increase the inventory, is a charge against the equipment account. A record should be made of all condemned equipment, which is then set aside for inspection. The inspection is made monthly, and at that time anything that can be repaired is sent to the repair shop, the remainder being sold, destroyed, or otherwise disposed of. The statement of equipment condemned is used by the storekeeper when making up his request for purchases to replenish his stock.

Inventory

The placing of stores under accounting control requires that the book inventory be checked up with a physical inventory. Thereafter physical inventories are taken at regular intervals—usually every six months or even oftener. Any discrepancies between the two inventories should be carefully investigated. If the errors are found to be of a clerical nature, proper entries should be made to correct them and steps should be taken to prevent their repetition. Should discrepancies be found to exist in the physical inventory,

an adjustment must be made by making a charge to an expense account called "Waste, Breakage, and Leakage." It is a necessary part of the accounting procedure that the stores inventory be reconciled on the general ledger with the stores account.

Farm and Dairy Products

When a city operates productive departments, such as farms or dairies, the products should be placed under stores control. Any vegetables, eggs, poultry, milk, or cream produced should be entered on the "Received" side of the stores ledger. The market value fixes their price. When disbursing home products, the procedure to be followed is the same as that for stores purchased from vendors. A monthly statement should be made of the value of farm and dairy products received by the storekeeper from the city farm, as these products lessen the expense of the productive departments.

Prison-Made Bread

It is a common practice to operate a bakery in connection with a penitentiary. The bakery receives flour, yeast, salt, and lard from the storehouse, and converts them into bread. The storehouse gives a standing order to the bakery to deliver bread daily, according to the census of the different institutions, the allowance usually being 30 ounces for men and 24 ounces for women. At the close of the month the bakery report of bread delivered is checked, and the cost figured. Institutions receiving prison-made bread are charged for it at cost, which is about 1¾ cents per pound. The charges for bread are arrived at by considering the cost of materials only, as it is not necessary for the purpose of stores accounting to consider overhead expense. These charges must therefore balance the cost of materials used each month.

Material Used for Repair and Maintenance Work

It is not practicable to keep in a storehouse all materials used for repair and maintenance work, and yet it is essential that they be placed under accounting control. Usually, carpenters, painters, plumbers, pipe fitters, masons, tinsmiths, and electricians have a shop in which to keep the materials required for their work. Such materials as are required for making roads and sewers are either piled about a municipal yard or delivered where they are to be used.

Such materials as the storekeeper cannot conveniently receive are delivered to the foreman, who keeps a record of all such deliveries. Whenever a foreman, mechanic, or laborer uses on a job material not kept in the storehouse, he should make a regular record of it and report it to the stores ledger clerk, so that it may be properly included in the monthly statement of stores disbursed.

Register of Stores Requisitions (Form 44)

The monthly reports of stores disbursed from the different storehouses must be summarized in order to obtain the necessary figures for journal entries. The columns in Form 44 provide for making charges against various expense, and work in process, accounts. At the end of the month, when all the stores reports have been received and entered on the register, the footings of the various columns provide the necessary figures for a journal entry crediting the stores account.

Accountability

Each step in the receiving and disbursing of stores needs to be surrounded with proper safeguards. No goods should be received unless passed upon as to quantity and quality by a competent inspector. No stores should be disbursed except upon a requisition which is prepared and approved

by properly authorized employees. The quantities called for by the balances on the stores ledger must be reconciled with a physical inventory. By placing all stores under accounting control, information not otherwise obtainable can be secured for budgetary purposes.

CHAPTER XIII

EXPENSE ANALYSIS

Functional Expense Accounts

The budget method of control over city expenditures is generally employed. It involves:

(1) A request for funds from the heads of the various city departments
(2) A consideration of these requests
(3) An allowance of such amounts as seem necessary and practicable

An intelligible budget request can be based only upon reliable estimates; and such estimates must be prepared from accounts kept on an income and expenditure basis. Data regarding expenditures, either for budgetary or administrative purposes, must be derived from a proper analysis of expense items; and the most satisfactory method of such analysis is to follow the functional divisions of a city's organization.

The first step, therefore, in an analysis of expense accounts is to investigate the organization of the city's departments, and the various functions or lines of activity in each. Such lines of activity with the divisions and subdivisions of each are shown in the following chart:

CHART SHOWING FUNCTION EXPENSE ACCOUNT CLASSIFICATION

A. GENERAL GOVERNMENT
  (1) Legislative
    (a) Board of Aldermen

(2) Executive
  (a) Administration
  (b) Inspection and Sealing of Weights and Measures
  (c) Issuance of Licenses
(3) Finance
  (a) Administration
    Executive
  (b) Collection
    Market and Sundry Revenues
    Current Taxes
    Assessments and Arrears
  (c) Accounting, Auditing, and Disbursing City Money
    Inspection
    Real Estate
    Law and Adjustment
    Charitable Institutions
    Audit
    Stocks and Bonds
    Accounts
    Paymaster
  (d) Investigation and Reports
(4) Law Offices
  (a) Administration
  (b) Legal Advice and Presentation
(5) Elections
  (a) Administration of Election Laws

B. Protection of Life and Property

(1) Police Department
  (a) Administration
    Executive
    Audit and Accounts

Purchase and Storage of Supplies
Records of Complaints
Printing

(b) Safeguarding Life and Property
Patrol
Traffic Regulation
Boiler Inspection
Census Collection
Enforcing Health Regulations
Medical and Surgical Service

(c) Pensioning Retired Employees

(d) Care of Buildings, Grounds, and Equipment
Headquarters
Station Houses
Stables
Horseshoeing
General Repair Work

(2) Militia and Armories
(a) Administration
(b) Maintenance of Armories

(3) Fire Department
(a) Administration
Executive
Audit and Accounts
Purchase and Storage of Supplies

(b) Fire Prevention
Inspection
Investigation (Fire Marshal)
Regulation (Combustibles)

(c) Fire Fighting
Extinguishing Fires
Medical and Surgical Service
Alarm Service

Maintenance of Volunteer Companies
Maintenance of Apparatus and Equipment

(d) Care of Buildings and Grounds

C. Health and Sanitation

(1) Health Department

(a) Administration
Executive
Audit and Accounts
Purchase and Storage of Supplies
General Medical Supervision
General Sanitary Supervision
Care of Buildings and Grounds

(b) Office of the Registrar
Tabulation of Vital Statistics
Searching and Transcribing Records
Book Bindery

(c) Promoting Public Health
Child Hygiene
Contagious Diseases
Communicable Diseases
Food Inspection
City and Country Milk Inspection
Investigation and Reports upon Complaints

(d) Laboratory Service
Research and Vaccine
Chemical
Drug

(2) Hospital Service
(a) Administration
Executive
Audit and Accounts
Purchase and Storage of Supplies
(b) Operation
(c) Care of Buildings and Grounds
(3) Sewage Disposal
(a) Administration
Executive
Audit and Accounts
Purchase and Storage of Supplies
(b) General Sanitary Supervision
(c) Sanitary Inspection

D. Highways
(a) Administration
Executive
Audit and Accounts
Purchase and Storage of Supplies
(b) Care of Highways
Executive
Engineering
Roadways, Viaducts, Stone Pavements
Sidewalks, Street Signs, Encumbrances

E. Charities and Corrections
(1) Charities
(a) Administration
Executive
Bureau of Information
Engineering
Audit and Accounts
Purchase and Storage of Supplies

(b) Poor in Institutions
Administration
Operation
Care of Buildings and Grounds
(c) Outdoor Poor Relief
(d) Children's Bureau
(e) Dependent Sick in Institutions
Administration
Operation
Care of Buildings and Grounds
(f) Insane in Institutions
(2) Corrections
(a) Administration
Executive
Audit and Accounts
Purchase and Storage of Supplies
(b) Prison Service
Care of Plant and Inmates
District Prison
City Prison
Workhouse
Reformatory
Penitentiary
General
(c) Ferry and Van Service
Stable
Operation of Ferry
Maintenance of Ferry
(d) Bertillon System
(e) Prison Industries
Reformatory
Penitentiary

F. EDUCATION*
(a) Administration

*For details see page 285 *et seq.*

(b) Instruction
(c) Operation and Maintenance
(d) General

G. Recreation
(1) Parks
(a) Administration
Executive
Audit and Accounts
Purchase and Storage of Supplies
Engineering
(b) Care of Parks and Boulevards
Care of Roads, Paths, and Driveways
Care of Trees, Shrubs, Flowers, and Lawns
Care of Buildings
Operation of Stables
Care of Trees in City Streets
Care of Menagerie
(2) Playgrounds
(a) Operation of Playgrounds

H. Care of Public Buildings
(1) Administration
(a) Executive
(b) Audit and Accounts
(c) Purchase and Storage of Supplies
(2) Care of Public Buildings and Offices
(a) Executive
(b) Repairing
(c) Janitor Service, Cleaners, Attendants
(d) Light, Heat, and Power
(3) Care of Baths and Comfort Stations
(a) Repairing

(b) Janitor Service, Cleaners, Attendants
(c) Light, Heat, and Power
(4) Supervision of Buildings, Construction, and Alteration
(a) Executive
(b) Inspection

I. Docks and Ferries
(a) General Administration
Executive
Audit and Accounts
(b) Administration and Overhead
Operation and Maintenance of General Office Building
Superintendence of Water Front
Engineering Supervision
Purchase and Storage of Supplies
(c) Patrol of Water Front and Berthing of Vessels
(d) Care and Maintenance of Water Front Property
Piers, Bulkheads, Slips, and Marginal Streets
Recreational Structures
(e) Municipal Ferry Operation and Maintenance
Supervision
Operation and Maintenance of Ferryboats
Operation and Maintenance of Terminals

The main divisions of the foregoing expense analysis correspond to the general functions or departmental divisions provided for by the city charter, while the minor ones

indicate the organization details of the various departments. The classification presented can readily be modified to meet varying local conditions.

Health Department Organization Chart (Exhibit A)

A chart of the organization of a city department indicates not only the divisions of its work, but suggests the official or employee responsible for the proper management of the same. The work of collecting vital statistics and promoting public health is a general function of all cities and the department of public health may therefore be taken for purposes of illustration. The chart shown in Exhibit A illustrates a typical organization and suggests the method to be followed in dividing up the departmental expenses.

The general administration of the health department is in the hands of a commissioner of health. Under his administration are six divisions subordinate to the office of the commissioner. Most of these are subdivided. Under the third division are shown four bureaus: (1) Child Hygiene, (2) Contagious Diseases, (3) Communicable Diseases, and (4) Inspection Service. Further subdivisions are shown on the lower portion of the chart.

Contagious Disease Hospital Organization Chart (Exhibit B)

Hospital service is an important function of the health department. When a contagious disease is reported to the health department, an inspection is made to see if the case can be isolated. If not, an ambulance is summoned to take the patient to a hospital for contagious diseases. In such hospitals special wards are set apart for diphtheria, measles, scarlet fever, and typhoid fever. The general organization of a contagious disease hospital is shown by the hospital organization chart (Exhibit B).

The executive head of a hospital is the resident physician. Under the direct control of his office are nine divisions. The doctors, nurses, pharmacist, and laboratory assistant care for the patients professionally. The matron is in charge of the kitchen, dining rooms, laundry, and dormitories. Various details in hospital organization are shown on the lower part of the chart. The expense accounts set up for an institution follow the lines of organization, as indicated in Exhibit B.

Chart of Hospital Accounts

A chart of accounts for a contagious disease hospital can readily be prepared from the organization chart. Beginning with the office of the resident physician, the several departments follow as shown below:

HOSPITAL ACCOUNTS

- Administration
  - Executive
  - Audit and Accounts
  - Storehouse
  - Engineering Supervision
- Professional Care
  - Wards
  - Pharmacy
  - Laboratory
- Kitchen and Dining Room Service
  - Doctors
  - Nurses
  - Help
  - Patients
- Departmental
  - Housekeeping and Dormitories

Laundry
Ice Plant
Morgue
Stable
Light, Heat, and Power

Maintenance of House and Property
Buildings
Grounds

As any unclassified expense arises it can readily be located against some particular function. In classifying expense items care must be exercised to see that the proper function is charged; otherwise expense reports become misleading.

Distinction Between Operation and Maintenance

In the preparation of an expense analysis of any function or activity in a department, it is quite essential to show the cost of operation separately from that of maintenance. Such an arrangement of the main elements is desirable as will show at a glance which items are of a current nature and which are of an extraordinary kind. In the bridge department, for example, it would be advisable to properly distribute the expenses of the department among the individual bridges and to subdivide the expense against each bridge between operation and maintenance. Then if any abnormal expense is reported during any period it can be readily investigated. If, for instance, the operation of a particular bridge is high, it may be due to an extra large staff of mechanics required to handle a swing bridge or some other easily traceable cause. Again, an abnormally high cost of maintenance may reveal the fact that the rigging has been neglected or that replacements have been unduly postponed, resulting in an excessive outlay for the current period.

Definitions of Expense Terms

Intelligent expense reporting calls for some uniformity in the use of terms. The following are the accepted definitions of the common expense terms used in the accounting department of the City of New York:

Supplies. Those articles which when used once only are either consumed or deteriorate perceptibly.

Equipment. Such articles as may be used over and over again without any perceptible impairment of their physical condition. A characteristic difference in treating equipment and supplies is the fact that equipment must in most cases be condemned before it may be replaced, while supplies, which are consumed in the using, need not.

Materials. Articles used for making repairs or for doing new work. Materials enter directly into the cost of a job.

Service by Contract or Agreement. A phase used to cover all work done by public or private companies. It naturally covers light, heat, power, telephone, rent, and cleaning service.

Fixed Charges. The term used to cover debt service, contributions, depreciation, insurance, and taxes.

Contingencies. A term used to cover petty expenditures, such as those paid from petty cash.

Subclassifications of Supplies

A standard set of classifications should be adopted for supplies in order to make reports uniform. The principle followed is to consider the use to which they are put. The thirteen subclassifications which follow provide all the headings necessary for the ordinary expense-reporting covering the supplies of a municipality.

(1) Agricultural and Botanical Supplies
Seeds, bulbs, young plants, fertilizers, etc., used for farm, park, or public grounds

(2) Cleaning and Disinfecting Supplies
Soap, soda, cleaning preparations, deodorants, and disinfectants

(3) Educational and Recreational Supplies
Articles of transient use required by schools, playgrounds, and recreation centers

(4) Food Supplies
All articles of food for human beings, but not spirituous and malt liquors

(5) Forage Supplies
All food articles of whatever nature used for live stock and animals

(6) Fuel Supplies
Coal, wood, and oil used for cooking, heating, and generating power (except gasoline or other fuel used in motor vehicles)

(7) Laundry Supplies
Soap, starch, blueing, and carbolic acid used for laundry purposes

(8) Medical and Surgical Supplies
Medicines, bandages, whiskey, wines and spirituous liquors, and laboratory supplies

(9) Motor Vehicle Supplies
Gasoline, lubricating oil, carbide, etc.

(10) Office Supplies
Articles necessary to the operation of an office, such as stationery and printing, postage, typewriter ribbons, inkwells, sponge cups, rulers, pen racks, rubber stamps, etc.

(11) Refrigerating Supplies
Ice, ammonia, salt, and other articles of similar character used for refrigerating purposes

(12) Veterinary Supplies
Articles used in the treatment of live stock and zoological specimens

(13) General (Plant) Supplies
Articles not otherwise classified, used in any plant, no matter what the plant may be

Subclassifications of Equipment

The subclassifications of equipment are somewhat more difficult to make than those for supplies. The following standard headings and uniform classifications are suggested:

(1) Educational Equipment
School books, maps, charts, globes, blackboards, schoolroom furniture, library books, etc.

(2) Household Equipment
Bedding, table linen, kitchen and dining room utensils, equipment for cleaning, such as brooms, scrubbing brushes, mops, pails, etc.

(3) Live Stock
Horses, mules, cows, heifers, bulls, sheep, goats, swine, zoological specimens, etc. (Live stock does not generally include stock purchased for slaughter or experimental purposes)

(4) Motor Vehicles and Equipment
Touring cars, runabouts, motor bicycles, accessories and parts

(5) Motorless Vehicles
Animal-hauled vehicles, sleighs and sleds, wheeled vehicles, hand carts, wheelbarrows, etc.

(6) Medical Equipment
Apparatus and instruments

(7) Office Equipment
Wooden desks, cabinets, files, tables, chairs, coat

trees, etc., metal furniture, safes, steel cabinets, etc., machines, letter presses, scales and other mechanical devices, office library books, etc.

(8) Recreational Equipment
Gymnasium equipment for outdoor and indoor use, musical instruments, etc.

(9) Surgical Equipment
Surgeon's operating tables, instruments, appliances, and accessories, dentists' instruments and appliances, veterinary surgeon's apparatus and utensils, photographic equipment and accessories

(10) Wearing Apparel
Uniforms and clothing worn by patients, employees, and inmates of hospitals, prisons, and other institutions; also helmets, boots, and all parts of uniforms such as buttons, shields, and badges

(11) Plant Service Equipment
Lighting equipment; accessories and parts
Heating equipment installed in buildings
Power plant and power transmission equipment
Ventilating and air purifying equipment
Refrigerating equipment for cold storage
Cleaning and renovating equipment

(12) Production, Construction, and Repair Work Equipment
Equipment for manufacture of prison-made goods
Road-making equipment; machinery and tools
Tools and equipment for track laying and rail handling
Special tools and appliances for the construction of buildings
Equipment for agricultural purposes
Repair shop equipment; machinery and tools

(13) Communication and Transportation Equipment
Telephonic and telegraphic equipment; accessories and parts
Elevators (not permanently attached to buildings)
Floating equipment; ferryboats, tugboats, police boats, training ships, launches, lighters, barges, buoys, fog signals, etc.
Steam and electric railroad equipment; accessories and parts
Containers for transporting and storing materials

(14) Protection of Life and Property Equipment
Fire fighting and fire preventing equipment
Life saving equipment (for fire and water)

(15) Miscellaneous Equipment
Correctional equipment; handcuffs, shackles, strait-jackets, etc.
Morgue and burial equipment and appliances
Small arms and accoutrements; rifles, swords, etc.
Receptacles for the deposit and collection of ballots, tickets, etc.
Flags, banners, and flagstaffs

Materials for Repairs

Materials used for repairs can be conveniently divided into the following four general classes:

Highway
Sewer
Building
General Plant

Service by Contract or Agreement

Service rendered by contract or agreement readily falls under the following heads for purposes of expense analysis:

Repairs
Light, Heat and Power
    Lighting Streets and Parks
    Lighting Public Buildings
    Heat
    Power
Janitorial Service
Transportation
    Hire of Horses and Vehicles
    Storage of Vehicles
    Boarding and Care of Horses
    Hire of Automobiles
    Express and Deliveries
Communication
    Telephone Service
    Telegraph Cable, Messenger

Fixed Charges

Fixed charges will naturally fall under the following divisions:

Debt Service
    Interest
    Redemption of Loans
    Sinking Fund Instalments
Rent
Pension
Insurance
State Taxes
Contingencies
    Carfares
    Entertainment
    Special Traveling Expenses
    Conventions

Departmental Expense Ledger (Form 73)

To maintain expense accounts along functional lines an expense ledger is kept. This ledger is provided with eleven columns, as follows:

(1) Date of invoice or other document
(2) Number of invoices or other reference
(3) Description of charge
(4) Total amount of charge
(5-11) Distribution of charges according to the subclassifications for supplies, equipment, materials, service, etc.

Whenever it happens that there are not enough distribution columns in Form 73 for making a proper analysis of departmental expenses, additional columns are provided by means of short insert sheets. Enough insert-sheets must be provided to take care of all the functions in each department. The name of the department and function are written across the top of the expense ledger sheet devoted to that function. For instance, where child hygiene is a division of the health department, separate expense ledger sheets should be used for the various activities of this department, somewhat as follows:

Supervision of Infants Boarded Out
Issuance of Employment Certificates
Supervision of Institutions for Dependent Children
Medical Inspection and Examination of School Children
Children's Clinics
Infants' Milk Stations

By dividing up expenses according to the lines of work in a department, information for cost and statistical statements may readily be obtained.

Operation of Departmental Expense Ledger

The departmental expense ledger is subsidiary to the controlling expense account in the general ledger, and it must contain an analysis of all charges to the general expense account. Index and colored sheets are used as a matter of convenience for keeping departments, divisions, and institutions separate. Personal service is posted to the expense ledger from the pay-roll distribution sheets. Stores disbursed are posted from the storekeeper's report of stores issued. Articles which are not under stores control are charged up on the expense ledger directly from the vendor's invoice. These same charges are, of course, entered in summary form in the general ledger; an expense ledger properly kept should at all times balance with the controlling expense account on the general ledger.

Monthly Statement

A departmental expense ledger, arranged according to functional account classifications, provides a practical basis for an analysis of a city's expenses. From the expense ledgers monthly statements can be obtained which show the expense of operation and maintenance in any department or division of the city government. Information for budgetary or administrative purposes is best obtained from the monthly expense statements.

CHAPTER XIV

MUNICIPAL COSTS

Per Capita Cost Statement (Form 45)

The city administration furnishes a great variety of services to the general public, and all these must be accounted for. In many cases the policy of a department depends upon the cost of the service rendered; and unless the cost data of municipal undertakings are proved up with the general books of account, they are not reliable. In short, the opportunities for efficient cost accounting are quite as great in the conduct of a city's business as in a private enterprise.

A common accounting requirement in connection with city institutions is the "per capita" cost; that is, the cost per day for inmates of penal and charitable institutions and patients in hospitals. The per capita cost is a sort of index of efficiency, and any material variation calls for investigation.

On the per capita cost statement (Form 45) are listed the various functions of a given institution or institutions, and against each of these is entered the monthly cost. The inmates are counted daily in order to obtain the census required for the per capita cost statements. In a hospital the "patient days" for any given period are obtained by adding these daily records. The total expense for a month divided by the total of patient days gives the per capita cost.

When the costs of institutions are distributed as shown on Form 45, not only the different per capita costs may be conveniently ascertained but also the relative expense of each

function determined. The sheet shown is arranged to give the costs of several hospitals in columnar form for easy comparison.

Cost of Kitchen and Dining Room Service (Form 46)

The kitchens and dining rooms are important departments of a hospital or other similar institution, and an intelligent idea of their cost can be gained only by a careful analysis of the expense account. The activities of these departments take ultimate shape in the form of meals, and in every institution for the care of the dependent sick, meals are provided for doctors, nurses, help, and patients. The average cost of the meals served to each one of these classes must be determined. Form 46 will be found convenient for setting up the various expense items chargeable to each kitchen and dining room. The classification of expenses characteristic of kitchens and dining rooms appears at the left of the form. The amount of these apportioned to doctors, nurses, help, and patients, respectively, appears in the proper column. The total of each column gives the total monthly cost of meals for a certain class of consumers. The number of meals served to each class during the month is entered at the foot of the column. This, when divided into the total of the column just above it, gives the average cost per meal for that particular kitchen and dining room.

Horse Day Costs

A city generally operates several stables in connection with the street-cleaning, fire, and other departments. In arriving at the cost of work done, the unit of measure taken is known as the "horse day"—productive time only being considered. The form of cost statement best suited for preparing an exhibit of horse day costs is columnar in form, with the names of stables listed across the top, and the ex-

pense classifications on the left. The following arrangement of stable charges is a convenient one for a street cleaning department:

STABLES LOCATED AT.. ....

EXPENSE CLASSIFICATION		
Personal Service	$.....	$.....
Supplies		
Live Stock		
Harness, Robes, Blankets		
Wagons and Carts		
Carriages and Passenger Conveyances		
Cart Covers and Side Boards		
Flushing Machines		
Sweeping Machines		
Snow Plows		
Wearing Apparel		
General Plant Equipment		
Service by Contract and Agreement		
Fixed Charges		
Total Expense	$.....	$.....
Number of horses in stables		
Pounds of grain fed per horse		
Productive horse days		
Cost per horse day	$.....	$.....

It is customary to base the allowance of grain to a stable on the number of horses to be fed. Space is left at the foot of the stable report for entering the pounds of grain fed per horse, in order to show whether the allowance is being exceeded.

The last entries made on the above report show the number of productive horse days, and the cost per horse day. Horse day costs generally run higher in the summer

than in the winter, because when work falls off in the street-cleaning department during the warm weather there are many "half-day horses."

Street-Cleaning Costs

To facilitate the work of supervising the street-cleaning department, the city is divided into districts, which are numbered and put in charge of district superintendents. The latter ride through their districts and oversee the work of street-cleaning, which is done by sweeping or flushing the streets, either by hand or by machine. The form of cost statement suited to the requirements of a street-cleaning department gives a list of the districts across the top, with the expense classifications at the left. The arrangement of district charges can be made as follows:

District Number		
Personal Service	$.....	$.....
Stable Expense		
Supplies		
Office Equipment		
Machine Brooms		
Push Brooms		
Refuse Cans		
Can Carriers		
Scrapers		
Tools Used in Hand Sweeping		
Hose		
Nozzles		
Fixed Charges		
Total Expense	$.....	$.....
Square yards of streets in district		
Average cost per square yard	$.....	$.....

Besides cleaning the streets, the street-cleaning department usually collects refuse, removes snow, and operates scows, incinerators, land fills, or water dumps, for the final disposition of ashes, sweepings, garbage, and rubbish. The most suitable units of measure for figuring the cost of refuse disposal are the loads disposed of under each class. The number of loads divided into the cost gives the average cost per load.

Laundry Costs and Production (Form 47)

An average cost system should be operated in connection with a municipal laundry, in order to show the cost of flat and hand work. Sometimes the same laundry does work for two or three hospitals, several clinics, and the departmental office buildings; and the average cost of flat and hand work is the only satisfactory basis for properly distributing the expense.

The various expense items of the laundry chargeable against the hand ironing, flat ironing, and kitchen departments, are set up as shown in Form 47. The totals are brought down, and the kitchen expenses are divided between hand and flat work. A record of the pieces of each class laundered must be kept and entered at the foot of the form in order to arrive at the average cost of pieces laundered. At the end of each month laundry charges should be prorated against the departments for which work is done.

Motor Vehicle Service Costs (Forms 48, 49)

In the larger cities the cost of motor vehicle service is an important item of expense, and requires careful reporting if it is to be kept within reasonable limits. The cost per mile of operation is as good an index of efficiency as can be found, and is the cost unit usually employed.

Two forms are used for the purpose of determining

motor vehicle costs. The first of these is the daily report card (Form 48). One of these cards is used each day for each motor vehicle maintained, and on it is entered a complete record of what that vehicle does for the day. The second form employed is the monthly summary (Form 49). This can be made to serve for as many vehicles as desired by the addition of columns, one column being required for each machine. At the left of the form appear the expense items chargeable to motor vehicles, the amount of each charge against any particular machine appearing in the column devoted to that machine.

The total miles run during the month are obtained for each machine from its daily report cards, and are entered on the monthly summary. This total for any machine, divided into the monthly expenses for the same, gives the average cost per mile of operation.

Cost of Inspection Service

The cost of inspecting food, milk, and sanitary conditions is a large item of municipal expense when taken in the aggregate. In order to place inspection service on a cost basis, it is necessary to show the average cost of each kind of inspection work. A report is generally kept in the inspection division, of the number and kind of inspections made, and when the respective totals for the months are divided into the expense for the corresponding class of work for the same period the average cost of each class of inspection service is obtained. In checking up the work done by different squads of inspectors, the average cost of inspection service is a valuable efficiency guide.

Cost of Treatments in Clinics

Municipal clinics generally keep a record of the number of treatments given. When this number for a given time,

as a month, is divided into the cost of operating and maintaining a clinic for the same period, the average cost per treatment is obtained. Where clinics are widely scattered, the unit cost is a valuable aid in determining efficiency.

In making budgetary allowances for clinics, the cost, as well as the work done, has a bearing on the appropriation granted. High unit costs, if these exist, can be studied into to see if they are due to the administrative policy, location, condition of applicants, or some other cause which might affect the proposed budget appropriation.

Light, Heat, and Power Costs (Exhibit C)

The application of the principles of cost accounting to the light, heat, and power plants of a city is of paramount importance, if leaks are to be stopped and waste curtailed. The most economical fuel may be purchased, the most efficient boilers be procured, and the machinery and appliances installed may be of the best; but these will be of little avail without the efficiency information furnished by a modern cost system. Cost data are, of course, necessary as a basis for properly fixing upon the rates to be charged for service supplied to consumers.

The method of finding the cost of light, heat, and power in a city plant is similar to that in any continuous process factory. The output at the various stages of production can be measured as accurately as that of a mill, and the unit costs determined as easily. The organization from an accounting point of view is graphically shown in Exhibit C. The steam generating system covers the boilers, boiler piping, coal and ash conveyors. The electric current generating system includes the engines, switchboards, and condensers, as well as the piping for engines and condensers. The electric current distributing system covers the main cables and wiring.

In the analysis of steam-generating expense, coal is by far the largest item. The weight consumed must be reported by the engineer so that the necessary charges can be made for it on the cost records. After coal come other items, arranged in the order of their expense importance, as shown in the following list:

Coal
Fixed charges
Repairs
Replacements
Firemen's wages
Water
Electric current used by forced draft and by coal and ash conveyors
Supplies
Salaries of engineers and assistant engineers

About 10 per cent of the steam generated in a light, heat, and power plant is used in boiler feed pumps and blow-off tanks. The other 90 per cent is transferred, unless diverted for heating purposes, to the electric current generating system, as shown by Arrow 1 on Exhibit C. The other expenses of the plant are shown in the light, heat, and power plant organization chart. The total cost of the electric current generated is transferred to the electric current distributing system, as shown by Arrow 2, on Exhibit C. From meter readings the K. W. hours distributed can be ascertained and the cost per unit easily found.

Gas Production Costs

The two general divisions of expense in a gas department are manufacturing and distribution. The following classification will be found convenient for setting up an exhibit of the cost of gas.

COST OF MANUFACTURE

Boiler fuel	tons	at	$.....	$.....
Enricher coal gas		at		
Fuel under retorts	tons	at		
Generator fuel	tons	at		
Gas coal	lbs.	at		
Manufacturing labor				
Oil (water gas)		at		
Purification labor				
Purification supplies				
Repair works—general				
Repair works—coal gas				
Repair works—water gas				
Water tax				
Ammoniacal liquor expense				
Coke expense				
Tar expense				
Fixed charges				
Gross cost of manufacture				$.....
Deductions:				
Rentals			$.....	
Tar produced	gals. at $.....			
Coke produced	lbs. at			
Net cost of manufacture				$.....

COST OF DISTRIBUTION

Complaint expense	$.....	
Distribution office expense		
Gratuitous work		
Repairs		
Setting and removing meters		
Street mains abandoned		
Cost of distribution		
Grand Total		$.....

The sum of the cost of manufacture and distribution gives the total cost, which, divided by the total number of cubic feet produced, gives the cost per cubic foot.

Water Department Costs

Cost accounting is necessary in the water department as a measure of efficiency and as a basis for charges to consumers. Water department costs can be grouped under three general heads: Administration, Operation, and Maintenance. Under administration are included all costs which pertain to the general management of the waterworks. Operating expenses cover the operation of waterworks as a mechanical, chemical, and biological system rather than as a business enterprise. Maintenance expense covers such costs as pertain to services and material for the repair and replacement of waterworks properties. The subdivisions of the waterworks costs conform to the physical arrangement of the plant as follows:

CHART OF WATER DEPARTMENT ACCOUNTS

- Administration
  - Executive
  - Purchase and storage of supplies
  - Audit and accounts
  - Engineering supervision
  - Injuries and damages
- Operation
  - Collecting system expense
  - Purification expense
  - Pumping expense
  - Distribution system expense
- Maintenance
  - Repairs
  - Replacements
- Fixed Charges

The basis for arriving at the unit costs is the cubic feet supplied to city departments and consumers.

Cost of Prison-Made Articles

The cost of articles produced in a prison differs from that of factory-made articles because there is no labor item to consider beyond a small amount of supervision. The chief element of cost is usually the material.

(1) Shoes

Thick, coarse leather is generally used for prison-made shoes, and a heavy, low-grade line of shoes is produced. The leather is given a lot number when it is put in stock, and the reports of leather used should show the quantity of shoes made from each lot. Efficiency in production is wholly a matter of the proper utilization of leather.

The operations required to produce the shoes are: (1) cutting; (2) preparation of soles; and (3) making. The cutting of the upper leather is done by the aid of exact patterns; and the estimated allowance for upper leather should not be exceeded. A proper cost system will quickly reveal any waste by careless cutters.

After the pieces have been cut for the uppers they are sewed together, and eyelets are inserted. During the time that the uppers are being prepared, the soles are also under way. In the making department the two come together, and the uppers are stretched over lasts and fastened to the sole leather. Any finishing touches required are added and the shoes are ready to be put in stock.

So far as overhead expense is concerned it is safe enough to distribute it equitably over the number of pairs of shoes produced. The cost of the leather actually used and a pro rata part of the burden, make up the total cost of producing prison-made shoes.

(2) Brushes

Prisoners are frequently employed in making brooms and brushes, which are classified as follows:

- Brooms
  - Common house
  - Street and stable
  - Whisk
- Brushes
  - Ceiling dusters
  - Counter dusters
  - Clothes
  - Dandruff
  - Floor, carpet, and oilcloth
  - Horse
  - Scrub
  - Shoe
  - Stove
  - Window

The raw materials used in the manufacture of brooms consist of corn, rattan, bass, bamboo, and hickory; and for brush bristles, sea root, Palmyra grass, monkey-grass, palmetto mixture, rice root, Mexican grass, black horsehair, Russian bristles, China bristles, and gray Tampico are used. Holes are drilled by the prisoners in the backs of brushes, and the bristles are then inserted and fastened. In the case of cylinder machine brooms used in sweeping streets the bristles are held in a spiral groove by means of a tight cord which is fastened to each end of the cylinder. These brooms are sold only to city departments, and are generally branded with the initials of the department for which they are made, in order to prevent any sale to private concerns.

(3) Bedsteads and Mattresses

The factory department of a prison is sometimes

equipped to produce the bedsteads and mattresses used throughout the various institutions in a city. The materials necessary are angle iron and pipe, wire, striped ticking, and hair. The iron-working department cuts and bends the iron, and then rivets together the pieces for the bedsteads, which are afterwards finished in the enameling department. They are generally coated white. The wire is made into springs by the use of special machines. Prisoners cut and sew up the cases for the mattresses, and afterwards stuff them with hair. The cost of material and the factory burden are the basis for fixing the selling price to the various city departments.

(4) Hosiery and Knit Goods

The inmates of city institutions have to be provided with hosiery and knit goods, and prisoners are often assigned to the work of making these in order to keep them busy. They use the circular, latch-needle knitting machines designed for making goods of the coarser grades. The tops and legs of hose are knit separately and afterwards joined together. The toe and heel are then closed up, and the stockings finished. The sleeves of underwear are knit separately from the bodies and afterwards joined. The underwear is then properly finished and packed for shipment to the institutions requisitioning it. The yarn, findings, and factory burden combined constitute the cost of prison-made hosiery and knit goods.

Profits on Prison-Made Goods

The law generally provides that the selling prices of prison-made goods shall be determined by a board; and these prices generally leave a margin of profit for the manufacturing industry. After depreciation, burden, and material have been paid for, the profits on prison-made goods go to the current fund.

Job Costs

A city must repair and maintain its equipment, highways, and sewers. The policy of department heads as to making use of departmental labor for repair work or having it done by outside concerns should depend upon the relative cost and efficiency of doing the work, as shown by an adequate system of job costs.

Repair shops, if maintained, do a variety of work; and a cost record is necessary for a proper distribution of charges. Every job must be paid for, and whether done by departmental labor or outside contractors its cost must be known and properly distributed.

Work Orders

When a system for figuring job costs is to be introduced, written work orders should be used as far as possible. Expenditures for time, material, and expense in connection with repairing, cleaning, and constructing pavements, viaducts, sidewalks, street signs, sewers, and culverts, should be made only on written orders.

Work orders readily fall into five classes, according to the kind of work authorized:

(1) General repair orders, issued for making repairs due to wear and tear.

(2) Pay orders, issued for the repairing or restoring of openings made by public service corporations, plumbers, and individuals, for which the city will be reimbursed.

(3) Emergency orders, issued for work necessary to put streets and sidewalks in a safe condition.

(4) Construction and maintenance orders, issued for new work or restoration jobs in connection with the maintenance of highways.

(5) Standing orders, issued for such jobs as do not require a separate production order, so that workmen's time may be properly reported. Odd jobs about the city yard or stables should be done on this class of orders.

Any work undertaken by those departments of a city requiring a record of costs can be authorized by one of the work orders mentioned.

Manifold Work Orders

It is desirable to prepare three copies of each work order as follows:

(1) Original, to be given to foreman who is to do the work.
(2) Duplicate, to be used as a requisition and for reporting the material used on a job.
(3) Triplicate, to be used as an office record and cost summary.

These work orders, in connection with reports of material, time and overhead expense, will give all the data needed to determine the cost of work done.

Daily Time Report (Form 50)

The daily time report provides a means for distributing workmen's time against work order numbers. It divides a twelve-hour day into one hundred and twenty units of six minutes each; and the general plan is called the decimal or unit system of timekeeping, because each hour is divided into ten parts. One time card is used daily for each workman. The card is kept by the foreman or timekeeper, who draws a horizontal line opposite the nearest six-minute unit when a job is commenced, writes below it the work order number, and draws a second horizontal line opposite the

nearest six-minute unit when the job is finished, and so on. Thus, in the daily time report shown in Form 50, workman No. 1 began at 8.00 A. M. on work order 1, and finished at 11.00 A. M., making three hours in all properly accounted for against the first job.

The amount chargeable against each job for the time spent is readily computed by the unit system, as follows: Opposite the time of commencing the first job the number 10.0 is found on the left-hand side of the time card, showing the number of hours left in the working day at the time the job was begun. Opposite the time of finishing the first job the number 7.0 is found, showing the number of hours still remaining. The elapsed time is now found by subtracting the lower number from the higher, and this elapsed time multiplied by the workman's hourly rate gives the proper amount to charge against work order 1, as follows:

Work Order 1	
Started	10.0
Finished	7.0
Elapsed Time	3.0
Hourly Rate	$.25
Amount	$.75

The amount chargeable against work orders 2 and 3 is found in the same way. At the foot of the daily time report the total amount due workman No. 1 for the day is entered, and below that the result of the distribution of time against jobs.

Driver's Daily Report

The driver's daily report is similar in form to the ordinary daily time report. One sheet is assigned to each driver daily; and the times of arrival and leaving are en-

tered by drawing a horizontal black line opposite the proper time unit, as already explained in connection with the operation of the daily time report.

Overhead Expense—Main Office

The overhead expense incurred in the main office of the department operating a cost system must be carefully analyzed, in order to properly dispose of it as a burden on work done. The expense analysis of a public works department, for example, naturally falls into the following classes:

10. Administration
    11. Executive
    12. Audit and Accounts
    13. Purchase and Storage of Supplies
20. Highways
    21. Executive
    22. Pavements and Viaducts
    23. Sidewalks, Street Signs, Encumbrances
30. Sewers
    31. Executive
    32. Cleaning and Repairing
40. Street Cleaning
    41. Executive
    42. Cleaning and Sweeping
    43. Carting and Stable
    44. Final Disposition
    45. Snow Removal
50. Engineering

These subdivisions of overhead expense along functional lines of activity are the best to follow in setting up the distribution of burden. The most convenient method for disposing of burden is as a percentage of the direct labor reported on jobs.

Cost Summary (Form 51)

This form is printed on the reverse side of the office copy of the work order, and is intended to show the amount of material, labor, and burden chargeable to the work order number. As soon as the work on any order is completed, the amount of labor expended should be entered on the original copy of the work order, which should be signed by the foreman to whom the order was issued, and sent to the office. This signed order acts as a notification that the work called for has been completed. The cost can then be figured.

The procedure followed in arriving at the cost of any particular job is to enter the stores requisitions and any direct invoice charges at the top of the cost summary (Form 51). The amount of labor chargeable to the particular work order number is next entered from the daily time report and drivers' daily report cards. The expense burden is entered as a percentage of the amount of labor reported. The summary of cost is made by adding the material, labor, and burden together. The unit cost can then be obtained by dividing the quantity of work done into the total cost. These cost summaries furnish a basis for the preparation of statistics not otherwise obtainable.

Register of Cost Sheets (Form 52)

This register is used for assembling completed cost summaries. It has columns for entering the following information:

(1) Date of completing work on order
(2) Work order number
(3) Description of work done
(4) Symbol showing the detail accounts to which charges are to be made
(5) Total cost of job
(6) Material reported

(7) Invoices
(8) Labor reported
(9) Burden applied

The register of cost sheets furnishes the information required when preparing closing journal entries at the end of each month.

Cost Analysis

From the cost summary sheets an analysis of the cost of work can be obtained. This readily falls under the following heads in a public works department:

Pavements
- Asphalt block
- Belgian block
- Brick
- Cobble stone
- Granite block
- Iron slag block
- Medina
- Six inch concrete
- Wood block

Dirt Street
- Roadway graded
- Roadway crowned and repaired
- Sidewalk graded
- Gutters formed

Culverts
- Wooden built
- Iron pipe

Sidewalks
- Bluestone
- Cement
- Concrete
- Brick

Miscellaneous
- Curbing reset
- Curbing dressed
- Crosswalks reset
- Crosswalks dressed
- Gutters cleared
- Flagstone relaid
- Repair of frost heaves

Street Cleaning
- Hand broom
- Machine broom

Refuse Collection
- House waste
- Street sweepings

Final Disposition at Dump
Sewer Repairs
Catch Basins Cleared

Under each of the above headings a distinction should be made between repair work and new work. Any one of the titles given can be subdivided so as to show the amount chargeable to repairs and that which is a permanent improvement.

Budget Per Capita Cost Statement

A city's budget can readily be set up so as to show not only the per capita cost of the budget as a whole, but also the per capita of each function. The method of arriving at the costs is to divide the appropriations for each general function by the city's census. In addition to the per capita costs the per centum of each group total is generally given, in order to show the proportion which is allotted to a given purpose of the city's total budget. The following statement shows the 1913 budget of New York set up so as to show the group totals, per cents, and per capita costs:

Budget for 1913, City of New York

Grouping of Appropriations according to General Function or Purpose	Budget of 1913 Group Totals	Per Centum of Each Group Total	Per Capita Cost 1913
Interest on the City Debt	$38,453,876.67	20.195	$7.16
Redemption of the City Debt	9,796,439.16	5.145	1.82
Redemption of Special Revenue Bonds	6,727,065.51	3.533	1.25
Total for Redemption of Debt and Payment of Interest	$54,977,381.34	28.873	$10.23
Administrative, i.e., General Administration	3,355,600.90	1.762	.62
Legislative (Aldermen and City Clerk)	301,808.84	.159	.06
Judicial	8,860,820.03	4.654	1.65
Educational	37,696,355.79	19.797	7.02
Health and Sanitation	17,978,409.04	9.442	3.35
Protection of Life and Property	31,165,682.76	16.367	5.80
Correctional Purposes	1,336,299.87	.702	.24
Charitable Purposes	8,692,741.38	4.565	1.62
Streets, Highways, and Bridges (Care and Maintenance)	5,347,918.55	2.809	1.00
Public Enterprises (Docks and Municipal Ferries)	2,944,677.57	1.546	.55
Recreation, Science, and Art, viz.:			
(a) Parks, Parkways and Drives	2,370,082.78	1.245	.44
(b) Zoological and Botanical Gardens, Museums, etc.	1,165,503.65	.613	.22
Public Buildings and Offices (Care and Maintenance)	947,880.86	.498	.17
Board of Elections and County Canvassers	1,330,940.00	.699	.24
Publication, Advertising, and Printing	1,345,346.75	.707	.25
Taxes, Rents, Pension, and Relief Funds, etc.	10,593,991.05	5.562	1.98
Totals of Budget Appropriations, per se	$190,411,441.16	100	$35.44
To provide for Deficiencies in the Collection of Taxes	2,300,000.00		
Grand Totals	$192,711,441.16		

(Estimated population at the middle period of 1913, 5,372,983.)

Graphic Form of Budget

For a graphic presentation of a city's budget under a general classification, see Exhibit G. The per capita cost of a city's government for a series of years, and the trend of such cost are shown in Exhibit I.

CHAPTER XV

ACCOUNTS RECEIVABLE

Controlling Accounts

The purpose of a controlling account is to prove the correctness of a subsidiary ledger, the various items entered in the subsidiary ledger being posted in summary form to the controlling account. A proof of the correctness of the postings is obtained by comparing a trial balance of the subsidiary ledger with the footings of the equivalent general ledger controlling account. As many of these controlling accounts may be opened as are found necessary to keep a check on subsidiary ledgers and records.

The operation of municipal accounts on an income and expenditure basis requires that all revenues and accruals be entered under proper controlling accounts in the general ledger. The opening of general ledger accounts for taxes receivable and departmental accounts receivable furnishes a safe and sound method of doing this.

Taxes

Taxes may be defined as an enforced contribution levied on persons, property, or income for the support of government. Under the more advanced forms of government, the taxing power resides in the more popular branch of the legislature.

The taxes which yield nearly all the public revenue are as follows:

(1) General property tax, levied on real estate and personal property.

(2) Poll or capitation tax, which is levied on persons.

(3) Franchise tax, which is levied on a privilege granted by the city, as, for example, the privilege of operating a trolley line.

Definition of Real Estate

The term "real estate" as defined by the tax law includes the following property:

Land above and below water
Buildings and structures affixed to the land
Wharves and piers, including the right to collect wharfage
Bridges
Telegraph lines, wires, poles, and appurtenances
Electrical conductors and appurtenances
Railroads, including the value of franchises
Street mains or pipe lines for conducting heat, water, oil, and electricity, including the value of all franchises
Trees and underwood growing upon land, and all mines, minerals, quarries, and fossils in and under same

Definition of Personal Property

The term "personal property" as defined by the tax law includes all chattels, money, things in action, and debts due from solvent debtors, whether on account, contract, note, bond, or mortgage.

Property Records

The charter of a city generally prescribes the method of preparing the records of assessable property. Land and buildings are assessed separately. The value of a building is best computed by applying an appropriate factor of value per

square foot to its entire floor surface. The factor of value must be adjusted with reference to the kind of building, the height between floors, the state of depreciation, and the per cent of lot area covered.

Tax Maps

In appraising the value of land, the assessors give due weight to the evidence furnished by sales, mortgages, and recorded leases. From these data, tax maps are prepared showing the value per front foot of inside lots on each side of every block, and the value per acre of unplotted land. The purpose of these maps is to exhibit for reference all the territory, with frontage values on every street, not only for the use of the assessor, but also to enable the commissioners to pass intelligently upon applications for reductions of assessed values.

The examination of houses, buildings, and lots is ordinarily made by deputy tax commissioners, who give the street, lot, block, map number, and name of occupant or owner, in their reports. Cards are especially well adapted for keeping the records required by assessors, and a standard card system is the most elastic and convenient method known for preparing assessment rolls.

Net Earnings Rule

According to the 1913 Municipal Year Book of the City of New York, page 45, "A special franchise, as defined by the tax law, is real estate. In assessing the value of a special franchise, the State Board usually applies what is known as the 'net earnings rule.' The net earnings of a corporation on its special franchise are calculated by deducting from its gross earnings all operating expenses, and a reasonable sum as income upon property other than its special franchise. The net earnings so obtained, capitalized at 7 per

cent, give the assessment of the special franchise for purposes of taxation. The taxes on any particular special franchise may be ascertained by applying the regular tax rate to this assessment."

Real Estate Record (Form 53)

This record is usually kept by the deputy tax commissioners, and provides the necessary information regarding assessable real estate. A page is given to each piece of property, and the identifying description, and other general details of the property are entered on the upper part of the page. Below, one line across the page serves for a year, and on this are entered the more specific details of the property, such as number, kind, and value of buildings, extent and value of land. Any necessary alterations can be made in the form of the real estate record, in order to make it conform to particular requirements.

Personal Property Record (Form 54)

This record, likewise kept by the deputy tax commissioners, gives the information regarding personal property necessary for tax purposes. The general arrangement of the form is the same as that of the real estate record, but differs as to details.

Entries on the real estate record and on the personal property record must not be confused. The owner of personal property is given one page in the personal property record. If he also owns real property he is given a page in the real estate record as well, but the record of personal property must not appear in the real estate record, nor must the record of real estate appear on the personal property record.

The printed headings of the personal property record are detailed and precise; and there is little excuse for the omission of any necessary details by the assessor if he uses even ordinary care.

Valuation History Record (Form 55)

It is usually desirable to keep a valuation history of all real property, for the entry of changes in ownership and valuation. This record is in addition to the ordinary real estate record. It is kept on cards, which are filed in the assessor's office according to the street location of the property, the guide cards being printed or lettered with the names of the city streets.

Register of Deeds (Form 56)

The register of deeds is one of the most important records of the assessor's office. The form shown provides for a complete description of all real property, and its transfers.

Annual Record of Assessment Valuations

It is the duty of the deputy tax commissioners to appraise all the assessable property in the municipality, and to prepare the annual record of assessment valuations. This record is made in several parts so as to show separately the tax on the real estate, personal property, and special franchises. An additional list is required in some states of the names of such persons as are assessed only for a poll tax.

Part 1 of the assessment roll usually contains six columns in which the assessors set down the following information:

(1) Name of owner
(2) Description of property
(3) Area or dimensions
(4) Value of real estate
    (a) Land
    (b) Buildings
(5) Amount of tax
(6) Date of payment

Part 2 of the assessment record contains the names of

all persons and corporations taxable on personal property, together with such additional data as is required, as follows:

(1) Name of owner
(2) Value of taxable personal property
(3) Value of the capital stock of each corporation
(4) Amount of tax
(5) Date of payment

Part 3 of the record of assessment valuation contains the name of each corporation, association, or copartnership taxable on a special franchise, and such other information as is provided for under the following headings:

(1) Name of corporation, association, or copartnership
(2) Description of special franchise
(3) Value of special franchise
(4) Amount of tax
(5) Date of payment

The same general form of assessment roll is used in preparing lists of persons or banks to be assessed for poll or bank taxes.

When the assessment is known, and the appropriations determined, the amount of the appropriations to be provided for by means of taxation is divided by the amount of the assessment to find the city tax rate. The appropriations must include state and county taxes.

The information required for compiling the records of assessments is obtained from the property records and card files. As soon as the deputy tax commissioners have completed their task, the annual record of assessment valuations is usually turned over to the department of taxes and assessments to be delivered to the board of aldermen as a basis for taxation.

Exemptions

All the property listed below is ordinarily exempt from taxation:

(1) Property belonging to the United States government and to the State
(2) Property of a city held for public use
(3) Real estate belonging to any association organized solely for religious or educational work
(4) Property used for religious, educational, hospital, benevolent, charitable, or patriotic work
(5) Properties for cemetery use

The real property of incorporated associations of volunteer firemen, and of clergymen who may be too infirm for the performance of their duty, is generally exempted by law. Also the real property of agricultural societies used for exhibition purposes, the property of medical societies, and similar properties used for semi-public purposes, are generally exempt from taxation.

Corrections in Assessment Valuations

Provision is usually made for corrections in the annual record of assessment valuations as a matter of statutory requirement. The books showing the assessment valuation of real estate and personal property are opened for public inspection at special times. During the time that the books are open any person or corporation claiming to be aggrieved by the assessed valuation of real estate or personal property may make application to have the records corrected. The usual mode of procedure is to state the objections in writing, giving the reasons for making the request for relief. The board of taxes and assessments then examines into complaints. If in their judgment assessment valuations are erroneous, they cause the annual record of assessments to be

corrected. When an objection is made to the assessment on personal estate the applicant is examined under oath, and proper corrections are authorized by the board of taxes and assessment. As long as the annual records of assessment valuations remain open, either real estate or the names of owners may be added.

Assessment Rolls

When the annual record of assessment valuations has been finally completed, the assessors appear before an officer authorized by law to administer oaths, and subscribe to an oath which is printed on the tax roll and to which the officer certifies. Among other things the oath states that according to the best judgment and belief of the assessors the assessment roll contains a true statement of the aggregate amount of the taxable real and personal estate of every person named in the roll. The tax roll is delivered to the board of aldermen, which computes the tax rate. When preparing tax estimates allowance must be made for the revenue expected from all sources of the current fund and also for the deficiencies not provided for in prior tax levies. The tax rate is fixed in cents and hundredths of a cent upon each dollar of assessed valuation as provided by law.

The practice of adding unpaid charges for water rents, street sprinkling, and moth assessments to tax rolls, is often resorted to by municipalities. The addition of such charges is the next step in the preparation of tax rolls.

Triplicate Tax Bills

After the assessment rolls have been completed and the tax rate fixed, it is necessary to prepare three copies of the tax bill as follows:

First copy, called a memorandum bill, is delivered or mailed in advance to the taxpayer if he requests it.

Second copy becomes the receipted bill when the amount of the tax has been collected.

Third copy, called the counterfoil, is delivered to the financial officer at the time the tax is collected.

Tax bills should be so designed that details of the charge can be entered on one line running across the bill from left to right.

Condensed Billing System

The best method to pursue in preparing tax bills is to insert them in triplicate, together with a blank sheet of paper containing fifty numbered lines, in a flat bed typewriter provided with an adding attachment. Then, as the bills are written in succession from the original tax rolls, a carbon copy of them is obtained on the schedule. Fifty or more tax bills can be entered on a single schedule by this process of condensed billing.

After the tax bills have been written they are compared with the original tax rolls. The footings of the schedules of tax bills are next compared with the totals of the original tax rolls to see that both agree. The collector of taxes receives the original tax rolls, while the schedules, together with the tax bills, are retained by the chief financial officer.

Warrants for Collection

As soon as the tax rolls are completed it is usually the duty of the city clerk to procure warrants authorizing and requiring the receiver of taxes to collect the sums mentioned in accordance with the provisions of law. The warrants are properly signed and countersigned and delivered with the books to the receiver of taxes. At the same time, the comptroller is notified of the amount of taxes in each book, in order that he may cause the proper entries to be set up on the books of account.

Taxes Receivable

The receiver of taxes publishes in one or more newspapers the date when taxes are due. Tax levies become a lien on real estate affected thereby on the day they become due, and remain a lien until paid.

Assessments

Assessments are levied for local improvements. When it is proposed to make an assessment against owners, they are notified, so that they can present objections in writing if desired. The total amount of expense actually incurred by a city on account of assessable improvements is usually furnished to the board of assessors by the board charged with the execution of the improvements. Interest at the legal rate on payments made on account of the work must also be included in figuring the cost. Any awards to be made to persons injured by changes in grade or by similar incidental effects of the improvements are incorporated in the assessment. The board of assessors then levies the proper assessment upon the property benefited, in the manner prescribed by law. The property assessed is usually described in the same way as in the tax record. As soon as assessments are confirmed they are transmitted to the comptroller for entry and collection.

Meter Reader's Card (Form 57)

When a city operates a public utility, and supplies consumers at a fixed price, records must be kept showing the amounts due for service rendered. The quantity of water, gas, or electricity used can readily be obtained from meters, which are read monthly or quarterly as local conditions require. The most convenient form for the use of meter readers is one printed with meter dials, on which the position of the hands can be easily marked. The meter reader's card

as shown in Form 57 has six horizontal rows of five dials each. This record is printed on both sides of the page and carried in a loose-leaf binder. A card is assigned to each meter, and will last a year with monthly readings. In case of any dispute by a consumer, reference to the meter record cards shows the exact position of the hands on the dials of his meter at each date it was read.

Departmental Charges

Charges for new meters, turning water, gas, and electricity on or off, etc., are made in accordance with established rates. Charges for the care of cemetery plots and for the sale of lots and graves, are made by municipal cemeteries to defray costs of operation and maintenance. Similar departmental charges are numerous. Monthly, or at the close of any period found more convenient, service and departmental charges should be entered in a properly prepared record, and bills sent out to consumers and customers.

Accruals to Funds

Certain revenues accrue to the various funds as provided by law. These must be accounted for and properly entered in books prepared for the purpose. The usual books are as follows:

Register of Tax Rolls (Form 58)
Register of Departmental Accruals (Form 59)
Register of Sinking Fund Accruals (Form 60)
Register of Special and Trust Fund Accruals (Form 61)

From these registers may be secured totals to be entered to the proper controlling accounts in the general ledger. Each register is provided with the necessary columns for analyzing revenues and accruals according to the account classifications required.

Internal Check on Transactions

As already stated, proper control over a city's revenues and accruals requires that accounts be set up in the general ledger; and as soon as taxes, assessments, or departmental accruals become due, they should be brought under accounting control.

In order to handle accounts receivable properly, special records and books must be introduced into a city's accounting system. The proper operation of an accounts receivable system in connection with the general records of a city provides a check on revenues and departmental accruals not otherwise obtainable.

CHAPTER XVI

COLLECTIONS

The proper use of general ledger accounts affords a satisfactory method of controlling collections. When the required accounts are set up, they prevent any revenue or departmental accruals from being overlooked by the collector. The general ledger balances, in connection with supporting schedules prepared from the subsidiary ledgers, furnish a correct list of amounts due the city.

Tax Receipts

When the time arrives for collecting taxes, the tax bills are turned over to the collector of taxes by the chief financial officer. The collector of taxes makes a daily return to the chief financial officer of the day's collections, accompanied by counterfoils of the tax bills which have been paid. The collector of taxes also makes a report to the treasurer of the amount collected each day. The chief financial officer audits the tax receipts as to amount, interest, and additions, and also verifies the report made by the collector of taxes to the treasurer, using a date stamp to indicate in the schedule of tax bills the amounts paid. The open items in the schedule of tax bills represent unpaid tax bills in possession of the collector of taxes.

Tax Liens on Real Estate

As already stated, taxes become a lien on real estate affected thereby on the day when they become due, and remain a lien until paid. Delinquent taxpayers are charged interest at a rate fixed by law from the day taxes are due.

Tax liens remaining unpaid after a certain date are generally sold by the collector of taxes, who advertises the sale a certain number of days before it takes place. The proceeds of the sale are paid into the city treasury and deposited to the credit of the current fund. Transfers of tax liens and any assignments thereof are recorded in the same manner as mortgages.

Personal Property Taxes

When taxes on personal property remain unpaid after a certain date, warrants are issued and the taxes collected by distress and sale of the goods and chattels. The receipts from the sale are paid over to the receiver of taxes and the warrants returned. Any surplus from the sale of personal property is given to the person who had possession of the property when the sale was made.

Poll Tax Collections

Persons who do not pay their poll taxes are frequently placed under arrest and compelled to serve sufficient time in the workhouse to earn the tax.

Assessments and Water Rates

Assessments are not due until a certain number of days after they have been confirmed and proper entry of title has been made in a record provided for the purpose. The confirmation of assessments for local improvements is published in the papers, and shows the title and date of confirmation. Assessments for local improvements and water rates, including expense of water meters and connections, remain a lien on property benefited until paid. These liens are generally preferred in payment to all other charges.

Departmental Charges

Departmental charges are subject to certain rules and

regulations which govern their collection; though naturally conditions vary considerably, and the collection of departmental accruals must be conducted in accordance with the local provisions.

Register of Collections (Form 62)

When payment is tendered in settlement of taxes or assessments, it is accompanied by the original bill. The collection clerk looks up the original entries to see if any prior charges remain unpaid. The bills are also examined to see if any interest is to be added for overdue payments. Any abatements made in the original charges are shown on the bills. When the collection clerk has satisfied himself that the amount of money received properly settles the bill presented, he stamps the bill with a "date paid" stamp. The amount received is entered in the register of collections (Form 62). In this register are entered all receipts from taxes, departmental accruals, revenues, and miscellaneous collections. The column footings give the amounts required for making monthly entries to the general ledger accounts. If desired, only totals need be entered in the register of collections, the postings being made to the rolls from the receipt stubs after the latter have been numbered, bound, and listed on an adding machine.

Register of Abatements (Form 63)

The abatement of certain departmental charges is allowed in accordance with provisions of law. When the proper procedure has been complied with, the abatements are entered in the register of abatements.

Revenue from Licenses and Permits

A partial list of the licenses and permits from which a city receives revenue are as follows:

Issued by the Police Department
Boiler
Circus
Concert
Emigrant Boarding House
Masked Ball
Pistol
Theater
etc.
Issued by the Commissioner of Licenses
Employment Agency and Lodging House
Oil
Powder
Fireworks
etc.
Issued by Mayor's office
Billiard Table
Bowling Alley
Common Show
Dirt Cart
Driver
Express Driver
Hack Driver
Hand Organ
Junk Cart
Pawnbroker
Peddler
Public Cab
Stand—Bootblack
etc.

Register of Receipts from Bond Sales (Form 64)

This register is kept to show the receipts from the sale of revenue, special revenue, construction, and assessment

bonds. The form of register shown in Form 64 is provided with columns for obtaining the desired distribution against general ledger accounts. At the end of each month the footings of the various columns are carried to the general ledger.

Register of Tailings (Form 65)

The register of tailings gives a record of uncalled-for salaries and wages. The register shown in Form 65 provides for all necessary information. At the end of the month the footing of the amount column is carried to the general ledger by means of a journal entry.

Register of Deposits (Form 66)

This register shows the amount deposited as security by persons for whom work is done by the city. The columns shown on Form 65 provide for all information usually necessary regarding each deposit made. At the end of each month the footing of the amount column is carried to the general ledger by means of a journal entry.

Record of Daily Bank Balances (Form 67)

This form shows the exact standing of each city bank account. The total deposits and checks are entered daily in the respective bank columns. The balance or overdraft remaining at the end of any month is carried forward, so that the true balance can always be obtained by simply subtracting the check column from the deposit column. At the close of the month, or at such other time as the bank pass books are balanced, they must be reconciled with the balances shown by this record.

Financial Stationery

The term financial stationery is applied to forms such as permits, licenses, receipts, etc., which are printed, litho-

graphed, or engraved in a manner that renders imitation difficult. This special financial stationery is an obstacle to counterfeiting and helps to control departmental collections for the issuance of licenses, permits, and receipts for payments. The forms are arranged in books in which an original alternates with a counterfoil. The text is usually in black, and the numbers and any other figures or letters which identify or indicate the class of the document, are in red. Safety paper is usually employed, which in the larger cities carries the seal of the city in the watermark. Financial stationery is numbered by machinery, and a record of the numbers of each kind of form given out is kept in a special book, collecting agents and others receiving them being held accountable for all numbers issued to them.

A properly designed stock ledger can be used as a convenient means of controlling the distribution of financial stationery. One page in the stock ledger is used for each form number. A record is made of the financial stationery serial numbers when they are received from the printers; and when requisitions for financial stationery are received from the collecting agents, they are entered on the credit side of the stock ledger so as to show the serial numbers on the forms distributed. The monthly return made by collecting agents, showing the unused financial stationery on hand, must be checked with the counterfoils received during the month, and with the stock ledger, in order to see that no serial numbers are missing. Only quantities have to be taken into account on the financial stationery stock record, as the money value is not important.

Angle Rule Dating (Exhibit D)

When the terminal date of a license, permit, or other financial stationery is fixed, it is printed or engraved with the rest of the document in permanent form. If the amount

to be paid is also fixed, it is similarly made part of the original printing or engraving.

When the terminal date of financial stationery is variable, a stub is attached to the form, this stub being ruled in columns with thirty-one open spaces in each column. These spaces correspond to the days of the month, and are so numbered or otherwise arranged that when the stub is cut with an angle rule the date is clearly shown. Reference to Exhibit D illustrates the manner of operating the angle rule. In this example a license has been torn off under terminal date of May 19, as shown by the stub. This method of fixing the date of financial stationery prevents the terminal date from being tampered with, as the balance of the stub remains in the book from which the license is taken.

When licenses and permits terminate annually and the amount varies, the terminal date only is printed or engraved on the financial stationery. The stub then provides for showing amounts so graduated that by using an angle rule the amount received is clearly shown.

Licenses and permits having varying terminal dates and amounts should have a special stub, the upper part of which provides for showing the terminal date and the lower part the amount. By tearing the stub in two places both the terminal date and the amount can be cut by the angle rule.

Financial Condition

The total collections each day are deposited in the proper banks to the credit of the various funds of the city to which they belong. The daily totals are entered on the record of daily bank balances (Form 67) and the difference between the totals in the deposit columns and in the check columns shows the daily bank balance.

CHAPTER XVII

JOURNAL ENTRIES*

Illustrative journal forms will be found in Chapter XVIII, presenting the typical journal entries of a city as discussed in the present chapter. No attempt has been made at proper chronological dating of these entries; but they are given in their natural sequence, and afford the basis for the ledger postings and municipal balance sheets discussed in later chapters.

Classification of Municipal Journal Entries

The entries in a municipal journal fall into five main classes, each affecting a corresponding group of general ledger accounts:

(1) Current fund journal entries, covering the charges and credits to appropriation and special revenue bond fund accounts
(2) Capital fund journal entries, covering the charges and credits to capital fund accounts
(3) Sinking fund journal entries, covering the charges and credits to sinking fund accounts
(4) Special and trust fund journal entries, covering charges and credits to special and trust fund accounts
(5) Journal entries covering charges and credits to property accounts on the general ledger

*The number references following the subheads of the present chapter are the designating numbers of the corresponding journal entries found in Chapter XVIII.

Appropriation Entries

Appropriations Authorized (No. 1)

As soon as the printed budget is received, an entry is made in the journal charging Budget Requirements account and crediting Appropriations, 1914 (bringing in the year for which appropriations are made) with the full amount of the budget appropriation. This annual appropriation entry, which sets up the appropriations for the current year on the general ledger, should be headed—as shown in Chapter XVIII—with a suitable caption, as for example:

> "Annual budget for the year 1914. Estimated by the Board of Estimate and Apportionment, and passed by the Board of Aldermen. Amount required to pay the expense of conducting the public business for the ensuing year."

The detail column in the appropriations journal entry indicates the distribution of the appropriation; entries should be posted to the detail appropriations ledger in which an account is opened with each appropriation. The illustrative journal shows the appropriations entry made for setting up a budget amounting to $2,274,000, which in the detail column of the same journal is shown distributed under uniform account classification heads.

Contracts Reserve (No. 2)

At the end of each month an entry is made charging Appropriations account and crediting Contracts Reserve—Appropriations, for the contracts which act as encumbrances on appropriations, *i.e.*, which require a certain amount to be set aside to meet their demands. The register of contracts (Form 7) furnishes a monthly record of the amount required for the contracts reserve journal entry.

Contract Orders Uncleared

Orders drawn against formal contracts can be brought under accounting control by making an entry charging "Contract Orders" and crediting "Contract Orders Uncleared." The amount required for this entry is obtained monthly from the register of orders (Form 7). When the contract orders are liquidated by vouchers "Contract Orders Uncleared" is debited. The balance to the Contract Orders Uncleared account therefore shows the amount of orders drawn against contracts for which vouchers have not been approved.

Open Market Orders Reserve (No. 3)

At the close of each month an entry should be made charging Appropriations account and crediting Open Market Orders Reserve—Appropriations, for the open market orders which act as encumbrances on appropriations. The register of open market orders (Form 8) gives the required amount for this journal entry.

Miscellaneous Claims Reserve (No. 4)

At the time of closing the books each month, an entry should be made charging Appropriations account and crediting Miscellaneous Claims Reserve—Appropriations, for the miscellaneous claims which act as encumbrances on appropriations. The amount required for this entry is obtained from the monthly footing of the register of miscellaneous claims (Form 9).

Vouchers Payable (Nos. 5, 5a)

The vouchers payable out of appropriation funds should be summarized monthly according to current fund account classifications. An entry should then be made charging Expense and the various accounts affected, and crediting Vouchers Payable—Appropriations, for the amount of ap-

propriation vouchers registered during the period. The vouchers payable entry sets up the liability on claims to be liquidated out of appropriation funds.

A collateral journal entry must next be made in the fund group of accounts, showing the amount of liability deducted from the available cash surplus. In order to prepare this journal entry properly, a classification of the appropriation vouchers registered during the month should be made, according to claims. Entries can then be made charging Contracts Reserve — Appropriations, Open Market Orders Reserve—Appropriations, Miscellaneous Claims Reserve—Appropriations, and crediting Available Cash Surplus for the amount of appropriation vouchers registered.

The illustrative journal shows appropriation vouchers amounting to $516,000 distributed against current fund account classifications, and in the collateral journal entry the same amount deducted from the available cash surplus. For every transaction which affects both proprietary and fund accounts a collateral journal entry must be made. If the collateral entry is omitted the fund accounts will not show the cash in excess of current liabilities.

Pay-Rolls Payable (Nos. 6, 6a)

Pay-rolls which are payable out of appropriation funds should be summarized according to the current fund account classifications. At the close of each month an entry should be made charging Expense and any other accounts affected, and crediting Pay-Rolls Payable—Appropriations, for the amount of appropriation pay-rolls registered during the period. This "Pay-Rolls Payable" entry sets up the liability on pay-rolls to be liquidated out of appropriation funds.

An entry is next made charging Appropriations account and crediting Available Cash Surplus account for the amount of the pay-rolls registered during the month. Thus the

balance of the Available Cash Surplus account is kept equal to the difference between the cash and current liabilities in the proprietary group of current fund accounts.

Judgments and Mandamuses Payable (Nos. 7, 7a)

Judgments and mandamuses payable out of appropriation funds should be summarized according to current fund account classifications. At the end of each month an entry should be made charging Work in Process and any other accounts affected and crediting Judgments and Mandamuses Payable—Appropriations, for the amount of judgments and mandamuses registered during the month. This "Judgments and Mandamuses Payable" journal entry sets up the liability on judgments and mandamuses to be liquidated out of appropriation funds. An entry should then be made charging Appropriations account and crediting Available Cash Surplus account for the amount of judgments and mandamuses registered during the month.

The entries to the proprietary group of accounts and to the fund group of accounts are obtained from the register of judgments and mandamuses (Form 30).

Cash Paid Entry (No. 8)

At the end of each month the register of checks (Form 32) should be footed. An entry can then be made charging Vouchers Payable, Pay-Rolls Payable, Judgments and Mandamuses Payable—Appropriations, and crediting cash.

Insurance Expiration Entry (No. 9)

In order to arrive at the exact amount of expense incurred monthly for insurance, it is necessary to make an entry charging Expense account and crediting Insurance Prepaid account. The amount of insurance which expires each month is obtained from the register of insurance premiums. The illustrative journal (No. 9) shows the

amount of insurance charged to expense during one month to be $1,000, which reduces the amount of insurance prepaid shown by the ledger so that it agrees with the cancellation value of insurance policies in force.

Stores Distribution Entry (No. 10)

The amount of stores consumed each month should be journalized in order to obtain the proper charges against Expense and Work in Process accounts. The amount of stores distributed is obtained from the register of stores requisitions (Form 44). The credit to Stores account reduces the book value of stores to agree with the inventory value of stores on hand.

Burden Distribution Entry (No. 11)

The overhead burden to be applied on work in process should be incorporated into a journal entry charging Work in Process account and crediting Expense—General Government. The illustrative journal entry shows $100,000 of expense applied as a part of the cost of work in process. The amount for this entry is obtained from the register of cost sheets (Form 52).

Taxes Receivable (Nos. 12, 12a)

As soon as the tax rolls have been approved, an entry should be made charging Taxes Receivable, according to current fund account classifications. Reserve for Abatement of Taxes should be credited for the amount set aside for abatement, and the balance credited to Revenue—General Government.

An entry should then be made in the fund group of accounts charging Unapplied Surplus account, and crediting Budget Requirements account, for an amount equal to the net taxes receivable. The "Unapplied Surplus" journal entry is required in order to make the balance of the Un-

applied Surplus account equal to the difference between the accounts receivable and the temporary loans. The illustrative journal shows the net taxes credited to Revenue—General Government, to be $1,200,000, the same amount being charged to the Unapplied Surplus account by the collateral journal entry.

Departmental Accounts Receivable (Nos. 13, 13a)

As soon as charges for services rendered by the water supply, electric light, gas supply, and cemetery departments have been registered, an entry should be made charging Departmental Accounts Receivable and crediting Revenue, according to current fund classifications. The total departmental revenue should then be charged to Unapplied Surplus account and credited to Budget Requirements account, in order to show clearly the revenue from departments added to the unapplied surplus.

Accounts Receivable Collections (Nos. 14, 14a)

Taxes and departmental accounts collected should all be charged to cash and credited to the proper controlling accounts. By thus running collections through the proper accounts receivable, control is maintained over the collecting officer. The amount of book accounts collected should then be charged to Available Cash Surplus account and credited to Unapplied Surplus account.

The illustrative journal shows collections on book accounts amounting to $359,000, which are applied to reduce the amount of accounts receivable outstanding, and to increase the available cash surplus. Both entries are obtained from the register of collections (Form 62).

Cash Collections (Nos. 15, 15a)

Cash collected on account of licenses, permits, fines, and forfeits, should be charged each month to Cash account and

credited to Revenue—General Government. The amounts required for this entry appear in the register of collections (Form 62). The amount of the collections should then be charged to Available Cash Surplus account and credited to Budget Requirements account.

Miscellaneous Collections (Nos. 16, 16a)

Any revenue collected which operates to reduce the cost of maintaining city departments should be charged to Cash account and credited to Abatement of Expense—General Government. Collections on account of interest should be charged to Cash account and credited to Interest Received account. This amount should then be charged to Available Cash Surplus and credited to Budget Requirements account, in order to maintain the proper relation between the fund and proprietary groups of accounts.

Revenue Bond Sales (Nos. 17, 17a)

Any receipts from the sale of revenue bonds issued in anticipation of the collection of taxes should be charged to Cash account and credited to Revenue Bonds. In making this entry it is necessary to give the date of the tax levy in anticipation of which the revenue bonds are issued. The amount of revenue bonds sold is obtained from the register of bond sales (Form 64). The next step is to make an entry charging Available Cash Surplus account and crediting Unapplied Surplus for this amount.

Abatement of Taxes Entry (No. 18)

Whenever taxes are abated the proper procedure is to charge Reserve for Abatement of Taxes and credit Taxes Receivable under the proper ledger account classifications. The amount for this entry is obtained from the register of abatements (Form 63).

Special Revenue Bond Fund Entries

Special Revenue Bond Funds Authorized (No. 19)

When special revenue bond funds are authorized to secure funds for purposes not provided for in the annual budget, an entry should be made charging Special Revenue Bond Fund Requirements and crediting Special Revenue Bond Fund Authorizations. The authorization account opened by this entry sets up a control over the claims which can be allowed to encumber special revenue bond funds. The items in the detail column of the special revenue bond funds entry are posted to the bond fund ledger (Form 69). The illustrative journal shows the amount of special revenue bond funds authorized to be $300,000, which amount is entered in total in the general ledger, and in detail in the bond fund ledger.

Sundry Special Revenue Bond Fund Accounts

The journalization of the items which come under the special revenue bond fund accounts listed below are not shown in the illustrative journal of Chapter XVIII. The principles involved are, however, similar to those already described in the present chapter in connection with the appropriation accounts, and illustrative journal entries for these are found in Chapter XVIII, entries 2 to 8.

Contracts Reserve (No. 20)
Open Market Orders Reserve (No. 21)
Miscellaneous Claims Reserve (No. 22)
Vouchers Payable (Nos. 23, 23a)
Pay-Rolls Payable (Nos. 24, 24a)
Judgments Payable (Nos. 25, 25a)
Cash (No. 26)

Cash Sales Entry (Nos. 27, 27a)

Whenever special revenue bonds are sold, an entry

should be made charging cash, and crediting "Special Revenue Bonds to be Included in Tax Levy." It is necessary to name the year of the tax levy referred to. The register of bond sales (Form 64) gives the amount required. An entry should also be made charging Available Cash Surplus and crediting Unapplied Surplus account.

Equipment and Sundry Accounts—Closing Entry (No. 28)

Equipment and Tools, Work in Process, and any suspense items payable out of budgetary allowances are closed into Expense at the end of each accounting period.

Abatement of Expense—Closing Entry (No. 29)

The first step in closing the current fund accounts is to charge Abatement of Expense—General Government, and credit Expense—General Government. This entry leaves the balance in Expense—General Government equal to the net departmental expense incurred for the period.

Final Closing Entries (Nos. 30, 30a)

The balances of Expense, and Interest Paid, accounts are closed into Surplus account, and a reserve is set up for insurance prepaid and stores, in order to maintain the surplus equal to the difference between current fund assets and liabilities. The balances in revenue accounts and Interest Received are closed into Surplus account.

Capital Fund Entries

Construction Funds Authorized (No. 31)

Whenever long-term bonds are authorized to provide funds for docks, ferries, rapid transit purposes, water supply, or other public improvements, an entry should be made charging Construction Fund Requirements and crediting Construction Fund Authorizations account. The authoriza-

tions account thus opened sets up a control over the claims which can be allowed to encumber bond funds. The items in the detail column of the construction fund journal entry are posted to the bond fund ledger (Form 69).

Sundry Capital Fund Accounts

The journalization of the items which come under the capital fund accounts listed below are not shown in the illustrative journal of Chapter XVIII. The principles involved are, however, similar to those described in the present chapter in connection with the appropriation accounts, and illustrative journal entries for these are found in Chapter XVIII, entries 2, 3, 5 to 8.

Contracts Reserve—Construction and Equipment (No. 32)
Open Market Orders Reserve (No. 33)
Contracts Reserve—Real Estate Purchases (No. 35)
Vouchers Payable (Nos. 36, 36a)
Pay-Rolls Payable (Nos. 37, 37a)
Judgments Payable (Nos. 38, 38a)
Cash (No. 39)
Collections (Nos. 40, 40a)
Accounts Receivable (No. 41)

Reserve for Awards—Condemnation Proceedings (No. 34)

When real estate is purchased subject to condemnation proceedings, an entry should be made charging Construction Fund Authorizations and crediting Reserve for Awards—Condemnation Proceedings. The register of obligations incurred by condemnation proceedings furnishes a monthly record of the amount required.

Construction Bond Sales Entry (No. 42)*

Any receipts from the sale of construction bonds should

*For illustrative entry, see Chapter XVIII, entry 17.

be charged to Cash account and credited to Capital account. This entry is obtained from the register of bond sales (Form 64), and sets up the principal of the city debt.

Due to Other Funds; Unapplied Surplus (Nos. 43, 43a)

Assessments payable out of construction funds should be charged to Construction and Equipment account and credited to Due to Other Funds—Special and Trust Funds. The amount for this entry is obtained from the register of assessments. This amount should next be charged to Construction Fund Authorizations account and credited to Unapplied Surplus account .

Capital Surplus Entry (No. 44)

In order to properly transfer the completed construction and equipment to property accounts, an entry must be made charging Capital Surplus and crediting Construction and Equipment account. This entry takes the construction and equipment completed during the period out of the current construction funds; and the next step is to set up reserves for construction and equipment and also for real estate, which have not been transferred to property accounts.

Construction Bonds Liquidated Entry (Nos. 45, 45a)

Whenever construction bonds are liquidated by means of sinking fund moneys, an entry should be made charging Construction Bonds account and crediting Capital Surplus account with the amount. A collateral entry should also be made charging Unapplied Surplus account and crediting Construction Fund Requirements account.

Sinking Fund Entries

Reserve Required to Meet Bonded Debt and Interest Payments (Nos. 46, 47)

A yearly estimate should be made of the annual payments

required to liquidate the principal of the city debt, and an entry made charging Sinking Fund Requirements and crediting Reserve Required to Meet Bonded Debt at Maturity. This entry sets up the amount which the sinking fund commissioners expect to receive during the current year for the redemption of revenue bonds, fire bonds, water bonds, etc. An estimate of the amount required to meet current interest payments should also be made, and an entry prepared charging Sinking Fund Requirements account and crediting Reserve Required to Meet Interest Payments on Bonded Debt. This entry sets up the amount which the sinking fund commissioners expect to receive for meeting interest payments on the principal of the city debt.

Sinking Fund Budget Moneys (Nos. 48, 48a)

When budget moneys are contributed to the sinking fund an entry should be made charging Cash—Sinking Fund and crediting Sinking Fund Surplus account. This entry properly opens the sinking fund cash account. A collateral entry for budget moneys contributed to the sinking fund should then be made, charging Available Cash Surplus account and crediting Sinking Fund Requirements account.

Sundry Sinking Fund Accounts

The journalization of the items which come under the sinking fund accounts listed below are not shown in the illustrative journal of Chapter XVIII. The principles involved are, however, similar to those described in the present chapter in connection with the appropriation accounts, and illustrative journal entries for these are found in Chapter XVIII, entries 5, 8, 14, 14a.

Vouchers Payable (No. 49)
Cash Paid (No. 50)
Collections (Nos. 54, 54a)

Debt and Interest Payments (Nos. 51, 51a)

An entry should be made for payments on account of debt and interest, charging Reserve Required to Meet Bonded Debt at Maturity, and Reserve Required to Meet Interest on Bonded Debt, and crediting Available Cash Surplus account. The next step is to make an entry charging Sinking Fund Surplus account and crediting Cash—Sinking Fund with the amount of debt and interest payments.

The amounts required for these entries are obtained from the register of checks.

Accrued Interest and Sinking Fund Requirements (Nos. 52, 52a)

When interest accrues to the sinking fund an entry should be made charging Interest Receivable and crediting Surplus—Interest, in order properly to set up the revenue for the current period. A collateral entry of interest accruals should also be made charging Unapplied Surplus account and crediting Sinking Fund Requirements. The amount required monthly for this entry is obtained from the register of accruals.

Revenue and Unapplied Surplus (Nos. 53, 53a)

When revenue accrues to the sinking fund, an entry should be made charging Accounts Receivable and crediting Surplus in order properly to set up the revenue for the period.

An entry should next be made charging Unapplied Surplus and crediting Sinking Fund Requirements for this amount.

Amortization of Premium Entry (Nos. 55, 55a)

Premiums on sinking fund securities should be regularly amortized by making a dual entry, first charging Sinking Fund Surplus and crediting Premium on Sinking Fund In-

vestments, and second, charging Sinking Fund Requirements, and crediting Available Cash Surplus, for the amount of the amortization. The amount required is obtained from the register of amortizations.

Sinking Fund—Closing Entry (No. 56)

At the close of each period the sinking fund revenue accounts should be closed into the Sinking Fund Surplus account.

Special and Trust Funds Entries

Special and Trust Funds Authorized (No. 57)

As soon as bonds are authorized to carry on the work of assessable improvements, an entry should be made charging Special and Trust Fund Requirements and crediting Special and Trust Fund Authorization account, in order to set up the special and trust funds on the ledger. The detail column of the special and trust funds entry should be posted to the detail bond fund ledger.

Sundry Special and Trust Fund Accounts

The journalization of the items which come under the special and trust fund accounts listed below are not shown in the illustrative journal of Chapter XVIII. The principles involved are, however, similar to those described in the present chapter in connection with the appropriation accounts, and illustrative journal entries for these are found in Chapter XVIII, entries 2 to 6a, 8.

Contracts Reserve (No. 58)
Open Market Orders Reserve (No. 59)
Vouchers Payable (Nos. 60, 60a)
Pay-Rolls Payable (Nos. 61, 61a)
Cash (No. 63)

Special Assessments Entry (Nos. 62, 62a, 62b)

Whenever assessments are levied against property owners an entry should be made charging Accounts Receivable and crediting Revenue—General Government, and whatever deficit remains in assessment funds after levying against property owners should be met from capital funds. This deficit should be charged to an account entitled "Due from Capital Funds" and credited to local improvements accounts. A collateral entry should then be made, charging Unapplied Surplus and crediting Special and Trust Fund Requirements. The register of assessment lists is the source of the collateral entry.

Assessment Bonds Entry (Nos. 64, 64a)

Cash received from the sale of assessment bonds should be charged to Cash account and credited to Assessment Bonds account. This amount should then be charged to Available Cash Surplus and credited to Unapplied Surplus.

Special Assessments Collections Entry (Nos. 65, 65a)

Whatever collections are made on account of special assessments receivable should be charged to Cash and credited to Accounts Receivable. A collateral entry should next be made charging Available Cash Surplus and crediting Unapplied Surplus account.

Unclaimed Salaries and Wages Entry (No. 66)

Whatever tailings are registered during the month should be charged to Cash and credited to Unclaimed Salaries and Wages account. When tailings are claimed a reverse entry should be made charging Unclaimed Salaries and Wages and crediting Cash account.

Depositors Cash Entry (No. 67)

Any moneys deposited with the city as a private trust

fund should be charged to Cash account and credited to Depositors account, in order to set up a control over the depositors ledger. This entry should be reversed whenever any money is returned to depositors.

Private Securities and Properties in Trust Entry (No. 68)

Whenever a city receives private securities and properties in trust, an entry should be made charging Securities and Properties in Trust and crediting Private Securities and Properties in Trust—Reserve. The reserve account is set up because the private securities and properties in trust do not operate as a revenue.

Bequests and Legacies Entry (Nos. 69, 69a)

Whenever public trusts, such as bequests and legacies, are received, an entry should be made charging Securities and Properties in Trust account and crediting Revenue—General Government.

Closing Entry (No. 70)

Whatever local improvements are finished should be written up on the property record of the city, and taken out of the special and trust fund accounts by an entry charging Special Accounts Surplus and crediting Local Improvements. A reserve should be set up for local improvements remaining open, by a charge to Special Accounts Surplus and a credit to Local Improvements Reserve account.

Property Accounts

Property Accounts Journal Entry (No. 71)

The inventory of city property should be set up under Land, Construction, Equipment, Work in Process, and Local Improvements. Depreciation on construction and equipment should be set up as a reserve and not deducted from the property accounts.

CHAPTER XVIII

ILLUSTRATIVE JOURNAL ENTRIES

The journal entries presented on the following pages are illustrative. They show the method of handling the municipal transactions during a year, and of closing the books at the end of each accounting period. The arrangement of the entries follows the usual order of the transactions recorded. The account numbers appearing before items correspond with those appearing in the chart of general ledger accounts in Chapter XX and with the numbers of the *pro forma* accounts of the same chapter. The numbers appearing above the entries correspond with those used in the discussion of journal entries in Chapter XVII.

JOURNAL

Annual budget for the year 1914. Estimated by the Board of Estimate and Apportionment and passed by the Board of Aldermen. Amount required to pay the expense of conducting the public business for the ensuing year.

January 31, 1914

Acct. No.	Entry No. 1		Charge	Credit
1	Budget Requirements		$2,274,000	
5	Appropriations, 1914.....			$2,274,000
	General Government			
	Legislative Offices	$3,000		
	Executive Offices	12,000		
	Finance Offices	10,000		
	etc., etc.			

January 31, 1914

Acct. No.	Entry No. 2	Charge	Credit
5	Appropriations, 1914.....	$400,000	
7	Contracts Reserve—Appropriations		$400,000
	Per register of contracts.		
	Entry No. 3		
5	Appropriations, 1914	375,000	
9	Open Market Orders Reserve—Appropriations		375,000
	Per register of open market orders.		
	Entry No. 4		
5	Appropriations, 1914	220,000	
11	Miscellaneous Claims Reserve—Appropriations		220,000
	Per register of miscellaneous claims.		
	Entry No. 5		
42	Expense—General Government ...	75,000	
43	Expense—Water Supply System..	20,000	
44	Expense—Electric Light System..	30,000	
45	Expense—Gas Supply System....	40,000	
46	Expense—Cemeteries and Crematories	20,000	
47	Interest Paid	10,000	
22	Insurance Prepaid	6,000	
23	Stores	175,000	
48	Equipment and Tools.....	10,000	
49	Work in Process.....	50,000	
50	Suspense	80,000	
24	Vouchers Payable—Appropriations		516,000
	Entry No. 5a		
7	Contracts Reserve—Appropriations	175,000	
9	Open Market Orders Reserve—Appropriations	171,000	
11	Miscellaneous Claims Reserve—Appropriations	170,000	
4	Available Cash Surplus.....		516,000
	Per register of vouchers.		

January 31, 1914

Acct. No.	Entry No. 6	Charge	Credit
42	Expense—General Government...	$75,000	
43	Expense—Water Supply System..	40,000	
44	Expense—Electric Light System..	20,000	
45	Expense—Gas Supply System.....	10,000	
46	Expense—Cemeteries and Crematories	19,000	
49	Work in Process.....	100,000	
26	Pay-Rolls Payable—Appropriations		$264,000
	Entry No. 6a		
5	Appropriations 1914.....	264,000	
4	Available Cash Surplus.....		264,000
	Per register of pay-rolls.		
	Entry No. 7a		
49	Work in Process.....	15,000	
28	Judgments and Mandamuses Payable—Appropriations		15,000
	Entry No. 7		
5	Appropriations 1914.....	15,000	
	Available Cash Surplus.....		15,000
	Per register of judgments and mandamuses.		
	Entry No. 8		
24	Vouchers Payable—Appropriations	210,000	
26	Pay-Rolls Payable—Appropriations	150,000	
28	Judgments and Mandamuses Payable—Appropriations	10,000	
13	Cash		370,000
	Per register of checks.		
	Entry No. 9		
42	Expense—General Government...	300	
43	Expense—Water Supply System..	300	
44	Expense—Electric Light System..	200	
45	Expense—Gas Supply System.....	200	
22	Insurance Prepaid.....		1,000
	Per register of insurance premiums.		

January 31, 1914

Acct. No.	Entry No. 10	Charge	Credit
42	Expense—General Government...	$5,000	
43	Expense—Water Supply System..	3,000	
44	Expense—Electric Light System..	3,000	
45	Expense—Gas Supply System.....	2,000	
46	Expense—Cemeteries and Crematories	2,000	
49	Work in Process.....	25,000	
23	Stores		$40,000
	Per register of stores requisitions.		
	Entry No. 11		
49	Work in Process.....	100,000	
42	Expense—General Government.		100,000
	Per register of cost sheets.		
	Entry No. 12		
14	Taxes Receivable—Real Estate—1914	750,000	
15	Taxes Receivable—Personal—1914	300,000	
16	Taxes Receivable—Poll—1914....	150,000	
17	Taxes Receivable—Corporation...	20,000	
18	Taxes Receivable—Special Franchise	10,000	
19	Taxes Receivable—Bank.....	20,000	
20	Reserve for Abatement of Taxes, 1914		50,000
35	Revenue—General Government.		1,200,000
	Entry No. 12a		
3	Unapplied Surplus.....	1,200,000	
1	Budget Requirements.....		1,200,000
	Per register of tax rolls for 1914.		
	Entry No. 13		
21	Departmental Accounts Receivable	235,000	
37	Revenue—Water Supply System		70,000
38	Revenue—Electric Light System		55,000
39	Revenue—Gas Supply System..		57,000
40	Revenue—Cemeteries and Crematories		53,000

January 31, 1914

Acct. No.	Entry No. 13a	Charge	Credit
3	Unapplied Surplus.....	$235,000	
1	Budget Requirements.....		$235,000
	Per register of departmental charges.		
	Entry No. 14		
13	Cash	359,000	
14	Taxes Receivable—Real Estate—1914		130,000
15	Taxes Receivable — Personal — 1914		165,000
16	Taxes Receivable—Poll—1914..		25,000
17	Taxes Receivable—Corporation.		10,000
18	Taxes Receivable—Special Franchise		6,000
19	Taxes Receivable—Bank.....		8,000
21	Departmental Accounts Receivable		15,000
	Entry No. 14a		
4	Available Cash Surplus.....	359,000	
3	Unapplied Surplus.....		359,000
	Per register of collections.		
	Entry No. 15		
13	Cash	125,00	
35	Revenue — General Government —Licenses and Permits.....		100,000
35	Revenue — General Government —Fines and Forfeits.....		25,000
	Entry No. 15a		
4	Available Cash Surplus.....	125,000	
1	Budget Requirements.....		125,000
	Per register of collections.		
	Entry No. 16		
13	Cash	150,000	
36	Abatement of Expense—General Government		100,000
41	Interest Received.....		50,000

January 31, 1914

Acct. No.	Entry No. 16a	Charge	Credit
4	Available Cash Surplus.....	$150,000	
1	Budget Requirements		$150,000
	Per register of collections.		
	Entry No. 17		
13	Cash	200,000	
30	Revenue Bonds (issued in anticipation of collection of 1914 taxes)		200,000
	Entry No. 17a		
4	Available Cash Surplus.....	200,000	
3	Unapplied Surplus.....		200,000
	Per register of bond sales.		
	Entry No. 18		
20	Reserve for Abatement of Taxes —1914	10,000	
14	Taxes Receivable—Real Estate —1914		5,000
15	Taxes Receivable — Personal — 1914		3,000
16	Taxes Receivable—Poll—1914..		2,000
	Per register of abatements.		

Special revenue bonds authorized to provide funds in excess of the budget allowances, for purposes for which no provision was made in the budget.

January 31, 1914

Acct. No.	Entry No. 19		Charge	Credit
2	Special Revenue Bond Fund Requirements		$300,000	
6	Special Revenue Bond Fund Authorizations			$300,000
	Board of Aldermen:			
	Expenses	$5,000		
	etc., etc.			

January 31, 1914

Entry Nos. 20 to 26

Acct. No.		Charge	Credit
	(For the principles involved in making journal entries 20 to 26, inclusive, which set up the reserves and cash payments, see journal entries 2 to 8.)		
	Entry No. 27		
13	Cash	$290,000	
31	Special Revenue Bonds (to be included in tax levy of 1915)		$290,000
	Entry No. 27a		
4	Available Cash Surplus	290,000	
3	Unapplied Surplus		290,000
	Per register of bond sales.		
	Entry No. 28		
42	Expense—General Government	455,000	
48	Equipment and Tools		20,000
49	Work in Process		348,000
50	Suspense		87,000
	Entry No. 29		
36	Abatement of Expense—General Government	100,000	
42	Expense—General Government		100,000
	Entry No. 30		
34	Current Surplus	910,000	
42	Expense—General Government		530,300
32	Insurance Prepaid Reserve		10,000
33	Stores Reserve		150,000
43	Expense—Water Supply System		63,300
44	Expense—Electric Light System		53,200
45	Expense—Gas Supply System		52,200
46	Expense—Cemeteries and Crematories		41,000
47	Interest Paid		10,000

January 31, 1914

Acct. No.	Entry No. 30a	Charge	Credit
35	Revenue—General Government...	$1,325,000	
37	Revenue—Water Supply System..	70,000	
38	Revenue—Electric Light System..	55,000	
39	Revenue—Gas Supply System....	57,000	
40	Revenue—Cemeteries and Crematories	53,000	
41	Interest Received.....	50,000	
34	Current Surplus.....		$1,610,000

Bond funds authorized to provide for acquisition of property, construction and alteration of buildings, purchase of equipment, etc.

January 31, 1914

Acct. No.	Entry No. 31		Charge	Credit
51	Construction Fund Requirements.		$100,000	
54	Construction Fund Authorizations			$100,000
	Police Department:			
	Construction of Prison.....	$40,000		
	Fire Department:			
	Fire Alarm Telegraph.....	11,000		
	Health Department:			
	Site for Sanitarium.....	5,000		
	etc., etc.			

Entry Nos. 32, 33

(For illustration of the principles involved in making entries 32 and 33 see entries 2 and 3, respectively.)

Entry No. 34

54	Construction Fund Authorizations		20,000	
58	Reserve for Awards—Condemnation Proceedings.....			20,000
	Per register of obligations incurred by condemnation proceedings.			

January 31, 1914

Acct. No.	Entry No. 35	Charge	Credit
58	Reserve for Awards—Condemnation Proceedings.....	$10,000	
56	Contracts Reserve—Real Estate Purchases		$10,000
	Per register of contracts.		
	Entry Nos. 36 to 41		
	(See journal entries 5 to 8 and 13, 14 for illustration of the principles involved in making entries 36 to 41a, inclusive.)		
	Entry Nos. 42, 42a		
	(For illustration of the principles employed in making entries 42 and 42a see entries 17 and 17a.)		
	Entry No. 43		
61	Construction and Equipment.....	5,000	
66	Due to Other Funds—Special and Trust Funds.....		5,000
	Entry Nos. 43a		
54	Construction Fund Authorizations	5,000	
52	Unapplied Surplus.....		5,000
	Per register of assessments.		
	Entry No. 44 (Closing Entry)		
	Entry No. 45		
67	Construction Bonds.....	6,000	
70	Capital Surplus.....		6,000
	Entry No. 45a		
52	Unapplied Surplus.....	6,000	
51	Construction Fund Requirements		6,000
	Construction bonds liquidated by sinking fund money.		

Reserves set aside to liquidate the principal of the city's debt at maturity and to meet yearly interest payments on the bonded debt per estimate of sinking fund requirements.

January 31, 1914

Acct. No.	Entry No. 46	Charge	Credit
71	Sinking Fund Requirements.....	$50,000	
74	Reserve Required to Meet Bonded Debt at Maturity.....		$50,000
	Entry No. 47		
71	Sinking Fund Requirements.....	5,000	
75	Reserve Required to Meet Interest on Bonded Debt.....		5,000
	Entry No. 48		
76	Cash—Sinking Fund.....	10,000	
82	Sinking Fund Surplus.....		10,000
	Entry No. 48a		
73	Available Cash Surplus.....	10,000	
71	Sinking Fund Requirements....		10,000
	Budget moneys contributed to the sinking fund.		
	Entry Nos. 49, 50		
	(For illustration of the principles involved in making entries 49 and 50 see numbers 5 and 8.)		
	Entry No. 51		
74	Reserve Required to Meet Bonded Debt at Maturity.....	5,000	
75	Reserve Required to Meet Interest on Bonded Debt.....	1,000	
73	Available Cash Surplus.....		6,000
	Entry No. 51a		
82	Sinking Fund Surplus.....	6,000	
76	Cash—Sinking Fund.....		6,000
	Per register of checks.		

January 31, 1914

Acct. No.	Entry No. 52	Charge	Credit
80	Interest Receivable.....	$1,000	
	Surplus		$1,000

Entry No. 52a

72	Unapplied Surplus.....	1,000	
71	Sinking Fund Requirements....		1,000
	Per register of accruals.		

Entry No. 53

39	Accounts Receivable.....	5,000	
82	Sinking Fund Surplus.....		5,000

Entry No. 53a

72	Unapplied Surplus.....	5,000	
71	Sinking Fund Requirements....		5,000

Entry Nos. 54, 54a

(For illustration of the principles employed in making entries 54 and 54a see numbers 14 and 14a, respectively.

Entry No. 55

82	Sinking Fund Surplus.....	250	
78	Premiums on Sinking Fund Investments		250

Entry No. 55a

71	Sinking Fund Requirements.....	250	
73	Available Cash Surplus.....		250
	Per register of amortization.		

Entry No. 56

(Closing Entry.)

Assessment bonds authorized to provide funds with which to regulate, grade, and pave streets, build sewers, and to carry on work of other assessable improvements.

January 31, 1914

No. Acct.	Entry No. 57		Charge	Credit
83	Special and Trust Fund Requirements		$50,000	
86	Special and Trust Fund Authorizations			$50,000
	Park Avenue Improvement....	$15,000		
	First Ward Street Improvement	10,000		
	Fund for Restoring Pavements..	5,000		
	Washington Road Improvement	10,000		
	Street Encumbrances.....	10,000		
	Entry Nos. 58 to 61			
	(For illustration of the principles involved in making entries 58 to 61 see entries 2, 3, 5, 5a, 6, 6a.)			
	Entry Nos. 62, 62a, 62b (See page 193)			
	Entry Nos. 63 to 65a			
	(For illustration of the principles employed in making entries 63 to 65a, see entries 8, 14, 14a, 17, and 17a, respectively.)			
	Entry No. 66			
89	Cash		500	
96	Unclaimed Salaries and Wages. Per register of tailings.			500
	Entry No. 67			
89	Cash		1,000	
97	Depositors ..... Per depositors register.			1,000
	Entry No. 68			
90	Securities and Properties in Trust		5,000	
99	Securities and Properties in Trust Reserve.....			5,000

January 31, 1914

Acct. No.	Entry No. 69	Charge	Credit
90	Securities and Properties in Trust	$35,000	
101	Special Accounts Surplus, Bequests and Legacies.....		$35,000
	Entry No. 69a		
84	Unapplied Surplus.....	35,000	
86	Special and Trust Fund Authorizations		35,000
	Entry No. 70 (Closing Entry.)		

Inventory of city property and depreciation reserves.

January 31, 1914

Acct. No.	Entry No. 71	Charge	Credit
102	Land	$5,000	
103	Construction	7,500	
104	Equipment	2,500	
105	Work in Process.....	15,000	
106	Local Improvements.....	27,000	
109	Property Account Surplus.....		$57,000
109	Property Account Surplus.....	625	
107	Depreciation on Construction Reserve		375
108	Depreciation on Equipment Reserve		250

CHAPTER XIX

GENERAL LEDGER ACCOUNTS*

CLASSIFICATION

General Classification of Ledger Accounts

The accounts in the general ledger control the detail ledgers, give a general exhibit of the city's financial condition, and facilitate the preparation of financial statements. They naturally fall into five main classes:

(1) Appropriation and special revenue bond fund accounts, which properly appear in the "Current Fund Balance Sheet" and supporting schedules
(2) Capital fund accounts which appear in the "Capital Fund Balance Sheet"
(3) Sinking fund accounts which appear in the "Sinking Fund Balance Sheet"
(4) Special and trust fund accounts which are set up in the "Special and Trust Fund Balance Sheet"
(5) Property accounts which appear in the "Property Account Balance Sheet"

The purpose of the general ledger accounts, the nature of the charges, and the credits to each are explained in this chapter.

Accounts Set Up in the Current Fund Balance Sheet and Supporting Schedules

Budget Requirements (Account 1)

This account is set up to show the amount of the budget

*The account numbers following the subheads of the present chapter indicate the corresponding ledger accounts in Chapter XX.

allowance to be provided for by the assessment of taxes, the accrual of departmental revenues, and miscellaneous receipts. It is charged for the amount of the yearly appropriation, and credited for the amount of—

(1) The tax levy
(2) Accrual of departmental revenues
(3) Collection of licenses, permits, fines, forfeits
(4) Miscellaneous receipts

The balance of the Budget Requirements account appears under the heading "Requirements and Surplus," in Part 1 of the current fund balance sheet.

Special Revenue Bond Fund Requirements (Account 2)

This account is opened to show the amount of special revenue bonds authorized to provide funds in excess of the budget allowance or for purposes for which no provision was made in the budget. It is charged when the authorization is made, and credited when budget funds are provided to take up the special revenue bonds. Its balance appears under the caption "Requirements and Surplus" in Part 1 of the current fund balance sheet.

Unapplied Surplus (Account 3)

This account is set up to show the excess of accounts receivable over temporary loans. The Unapplied Surplus account is debited with the amount of—

(1) The yearly tax levy
(2) Departmental accruals

It is credited with the amount of—

(1) Taxes collected
(2) Departmental accounts receivable collected
(3) Receipts from revenue bond sales

(4) Receipts from the sale of special revenue bonds The balance to this account appears under the caption "Requirements and Surplus" in Part 1 of the current fund balance sheet.

Available Cash Surplus (Account 4)

This account is opened to show the excess of cash over current liabilities. It is charged with—

(1) Current cash collections
(2) Departmental accounts receivable collected
(3) Receipts from licenses, permits, fines, and forfeits
(4) Miscellaneous cash receipts
(5) Amounts received from the sale of revenue bonds
(6) Receipts from special revenue bond sales

The account is credited with the amount of—

(1) Vouchers
(2) Pay-rolls
(3) Judgments and mandamuses payable out of appropriation and special revenue bond funds

The balance of the Available Cash Surplus account is set up under the "Requirements and Surplus" heading on Part 1 of the current fund balance sheet.

Appropriations, 1914 (Account 5)

This account is set up to show the unencumbered balance to the yearly budget allowance. It is credited with the total amount of the appropriation for the year, and is charged with the following:

(1) Contracts
(2) Open market orders
(3) Miscellaneous claims
(4) Pay-rolls

(5) Judgments and mandamuses which encumber appropriations

The balance of the Appropriations, 1914, account, which acts as a control over the detail appropriation ledgers, appears under the heading "Authorizations and Reserves" in Part 1 of the current fund balance sheet.

Contracts Reserve—Appropriations (Account 7)

This account sets up a reserve for municipal contracts which are to be liquidated out of appropriation funds. It is credited monthly for the amount of appropriation contracts registered, and charged monthly for the amount of contract vouchers payable out of appropriation funds, as shown by the register of vouchers payable. The balance of the Contracts Reserve—Appropriations account, which acts as a control over the detail ledger for appropriation contracts, appears under the caption "Authorizations and Reserves" in Part 1 of the current fund balance sheet.

Open Market Orders Reserve—Appropriations (Account 9)

The purpose of this account is to provide a reserve for open market orders issued by the city, which orders are to be liquidated out of appropriation funds. It is credited with the amount of open market orders payable from appropriations, as shown by the monthly footing in the register of open market orders, and is charged monthly for the amount of open market order vouchers payable from appropriations, as shown by the register of vouchers payable. The balance to the Open Market Orders Reserve—Appropriations account acts as a control over the detail ledgers for open market orders payable out of appropriations. In Part 1 of the current fund balance sheet the balance of Open Market Orders Reserve—Appropriations appears under the caption "Authorizations and Reserves."

Miscellaneous Claims Reserve—Appropriations (Account 11)

The purpose of this account is to set up a reserve for miscellaneous claims which are to be liquidated out of appropriation funds. It is credited with the amount of miscellaneous claims payable out of appropriation funds, as shown by the register of miscellaneous claims, and is charged for the amount of miscellaneous claims vouchers payable out of appropriation funds, as shown by the register of vouchers payable. The balance to this account appears under the caption "Authorizations and Reserves" in Part 1 of the current fund balance sheet.

Cash (Account 13)

This account shows the total cash available for the payment of current fund checks. It is charged with the cash received from—

(1) Collection of taxes and departmental accounts receivable
(2) Licenses, permits, fines, and forfeits
(3) Miscellaneous receipts
(4) Revenue bonds sold
(5) Special revenue bonds sold

It is credited with the vouchers, pay-rolls, judgments, and mandamuses liquidated by current fund checks. When the balance to the Cash account is reconciled with a list of outstanding checks, a control is obtained over the balance reported by the bank. The cash balance appears as the first item under "Assets" in Part 2 of the current fund balance sheet.

Taxes Receivable

Real Estate—1914 (Account 14)
Personal—1914 (Account 15)
Poll—1914 (Account 16)

Corporation (Account 17)
Special Franchise (Account 18)
Bank (Account 19)

The foregoing accounts are set up to show the total amount of taxes remaining uncollected. They are charged with the amount of tax accruals registered, and credited with—

(1) Amount of taxes collected as shown by the register of collections
(2) Abatements allowed as shown by the register of abatements

The balances to the Taxes Receivable accounts control the subsidiary ledgers in which detail accounts are kept. The taxes receivable balances are set up in Part 2 of the current fund balance sheet.

Reserve for Abatement of Taxes, 1914 (Account 20)

This account is set up as a reserve for the abatement of taxes. It is credited for taxes estimated uncollectable and charged for the amount of taxes abated as shown by the register of abatements. The balance of the Reserve for Abatement of Taxes is deducted from the total amount of accounts receivable on Part 2 of the current fund balance sheet.

Departmental Accounts Receivable (Account 21)

This account shows the total amount of departmental accounts receivable remaining uncollected. It is charged with the accruals from such departments as the water supply, electric light, gas supply, and cemeteries and crematories departments as shown by the register of accruals, and credited with the collection of departmental accruals as shown by the register of collections. The balance of the Departmental

Accounts Receivable account, which acts as a control over the subsidiary ledger in which detail accounts are kept, appears in Part 2 of the current fund balance sheet.

Insurance Prepaid (Account 22)

The purpose of this account is to show the amount of unexpired insurance premiums. It is charged for the premiums paid, as shown by the distribution of vouchers, and credited for the amount of premiums expiring monthly, as shown by the register of insurance expirations. The balance of the Insurance Prepaid account acts as a control over the record of insurance policies. Since insurance prepaid is not an asset available for liquidating current account liabilities, it is offset by a reserve in Part 2 of the current fund balance sheet.

Stores (Account 23)

This account shows the total amount of stores on hand. It is charged for the stores purchased, as shown by the distribution of vouchers, and credited for the stores withdrawn on requisitions. The balance of the Stores account acts as a control over the detail stores ledger. Since municipal stores are not available for liquidating current fund liabilities, they are offset by a reserve in Part 2 of the current fund balance sheet.

Vouchers Payable—Appropriations (Account 24)

This account shows the total amount of appropriations vouchers which have not been liquidated. It is credited for the amount of appropriations vouchers registered, and charged for the amount of appropriations vouchers liquidated, as shown by the register of checks. The balance of the Vouchers Payable—Appropriations account—which acts as a control over the subsidiary ledger in which vouchers payable from appropriations are entered—is the first item

appearing under the caption "Liabilities" in Part 2 of the current fund balance sheet.

Pay-Rolls Payable—Appropriations (Account 26)

This account shows the total amount of the city's liability on account of appropriations pay-rolls which have not been paid. It is credited for the amount of appropriations pay-rolls registered, and charged for the pay-rolls paid, as shown by the register of checks. The balance to this account is set up as a liability in Part 2 of the current fund balance sheet.

Judgments and Mandamuses Payable—Appropriations (Account 28)

The purpose of this account is to show the total amount of judgments and mandamuses payable out of appropriation funds which remain unpaid. It is credited with the amount of judgments and mandamuses payable, as shown by the register of judgments and mandamuses, and is charged with the amount of judgments and mandamuses liquidated, as shown by the register of checks. The balance is set up as a liability in Part 2 of the current account balance sheet.

Revenue Bonds (Account 30)

The Revenue Bonds account shows the total of revenue bonds outstanding. It is credited for the bonds sold, as shown by the register of bond sales, and is charged when revenue bonds are liquidated. The balance of the Revenue Bonds account appears under "Temporary Loans" in Part 2 of the current fund balance sheet.

Sundry Revenue Bond Fund Accounts

The following current fund accounts require no special comment. The proper entries for each are shown in the illustrative accounts of Chapter XX. The principles in-

volved are similar to those already described in detail in the present chapter.

Special Revenue Bond Fund Authorizations (Account 6)

Contracts Reserve—Special Revenue Bond Funds (Account 8)

Open Market Orders Reserve—Special Revenue Bond Funds (Account 10)

Miscellaneous Claims Reserve—Special Revenue Bond Funds (Account 12)

Vouchers Payable—Special Revenue Bond Funds (Account 25)

Pay-Rolls Payable—Special Revenue Bond Funds (Account 27)

Judgments and Mandamuses Payable—Special Revenue Bond Funds (Account 29)

Special Revenue Bonds (Account 31)

Insurance Prepaid Reserve (Account 32)

This account is opened as an offset to the Insurance Prepaid account, and is adjusted each month by a charge or credit sufficient to keep its balance equal to that of the Insurance Prepaid account. The balance of the Insurance Prepaid Reserve account appears under the heading "Reserves" in Part 2 of the current fund balance sheet.

Stores Reserve (Account 33)

This account is an offset to the Stores account. A charge or credit is made each month sufficient to adjust its balance with the balance of the Stores account. The balance of the Stores Reserve account appears under the heading "Reserves" in Part 2 of the current fund balance sheet.

Current Surplus (Account 34)

This account shows the excess of assets over liabilities

in the current fund. It is charged for the amount of expense and sundry charges applicable to the current period, and credited for the amount of revenue and interest accruing during the same period. An increase in the balance during a certain period shows the amount by which revenues have exceeded expense and sundry charges during that time. A decrease in the balance, on the other hand, shows the amount by which the expense and sundry charges have exceeded the revenue and interest accruals. The surplus account is shown under "Liabilities" in Part 2 of the current fund balance sheet. The surplus is divided to show—

(1) The amount by which the cash exceeds the current liabilities
(2) The excess of accounts receivable over temporary loans

The balance of the surplus account is shown to be the same in both Part 1 and Part 2 of the current fund balance sheet. An analysis of the charges and credits to Current Surplus account is shown on page 252, and this agrees with the amount of surplus shown on the current fund balance sheet.

Revenue—General Government (Account 35)

This account shows the total amount of revenue accruing to the general government. It is credited with—

(1) Net amount of the tax levy
(2) Receipts from licenses, permits, fines, and forfeits

The Revenue—General Government account is closed into Current Surplus.

Abatement of Expense—General Government (Account 36)

This account shows the total amount of miscellaneous collections which operate to reduce the departmental ex-

pense. It is credited with the total amount of miscellaneous collections made by departments. The balance to the Abatement of Expense—General Government account is closed into Current Surplus.

Revenue

Water Supply System (Account 37)
Electric Light System (Account 38)
Gas Supply System (Account 39)
Cemeteries and Crematories (Account 40)

These accounts are opened to show the total amount of revenue accruing to public utilities. They are credited for the amount of services rendered, and closed into Current Surplus.

Interest Received (Account 41)

This account shows the total amount of interest accruing to the current account. It is credited for interest earned and closed into Current Surplus.

Expense—General Government (Account 42)

This account shows the total amount of expense for each period chargeable to the Current Fund. Charges against Expense—General Government are made from—

(1) Distribution of vouchers
(2) Pay-rolls
(3) Insurance premiums
(4) Stores requisitions

The Expense—General Government account is credited for—

(1) Work in process
(2) Abatement of expense

The balance is closed into Current Surplus.

Expense

Water Supply System (Account 43)
Electric Light System (Account 44)
Gas Supply System (Account 45)
Cemeteries and Crematories (Account 46)

These accounts are charged from—

(1) Distribution of vouchers
(2) Pay-rolls
(3) Insurance premiums
(4) Stores requisitions

The balances are closed into Current Surplus.

Interest Paid (Account 47)

Interest Paid account shows the total amount of interest charges each month payable out of appropriations. The monthly charges are obtained from the register of vouchers. At the end of the month the account is closed into Current Surplus.

Equipment and Tools (Account 48)

This account shows the total amount of equipment and tools purchased from appropriations and special revenue bond funds. The charges to it are obtained from the distribution of vouchers register. At the end of the month the balance of Equipment and Tools account is closed into Current Surplus.

Work in Process (Account 49)

This account provides a control over the detailed records of costs. It is charged for the various elements going to make up the cost of repair and maintenance work. Direct invoice charges are obtained from the distribution of vouchers register, labor charges from the distribution of time sheet, judgments and mandamuses from a record of them

kept for the purpose of providing monthly totals, stores from the summary of requisitions, and overhead expense from the record of burden applied. At the end of each period the cost of work done is analyzed, and the balance to Work in Process account closed into Current Surplus. The cost of work which is of a permanent nature and not in any way of a maintenance character, should be entered on the equipment record of the city.

Suspense (Account 50)

This account is opened for the purpose of making the monthly adjustments necessary. Charges to the account are obtained from the distribution of vouchers. At the end of each period the balance is closed into Current Surplus and later reversed if desired.

Accounts Set Up in the Capital Fund Balance Sheet

Construction Fund Requirements (Account 51)

This account shows the amount of construction funds required for the acquisition of property, construction and alteration of buildings, purchase of equipment, etc. It is charged with the amount of construction bonds authorized and credited with—

(1) Accruals applicable to the capital fund
(2) Amounts received from the sale of construction bonds

The balance of this account shows the amount of capital fund authorizations remaining unprovided for. The balance of the Construction Fund Requirements account appears under the caption "Requirements and Surplus" on Part 1 of the capital balance sheet.

Sundry Capital Fund Accounts

The illustrative accounts in Chapter XX for the follow-

ing capital fund accounts show the usual procedure. The principles involved are similar to those already described in detail in connection with the appropriation accounts:

Unapplied Surplus (Account 52)
Available Cash Surplus (Account 53)
Construction Fund Authorizations (Account 54)
Contracts Reserve — Construction and Equipment (Account 55)
Contract Reserve—Real Estate Purchases (Account 56)
Open Market Orders Reserve (Account 57)
Cash (Account 59)
Accounts Receivable (Account 60)
Vouchers Payable — Construction Funds (Account 63)
Pay-Rolls Payable — Construction Funds (Account 64)
Judgments Payable—Construction Funds (Account 65)

Reserve for Awards—Condemnation Proceedings (Account 58)

This account shows the amount of obligations due on account of condemnation proceedings. It is credited with the amount shown monthly by the register of obligations incurred by condemnation proceedings, and charged with the amount of these obligations liquidated. The balance of this account is set up under the caption "Reserves" on Part 1 of the capital fund balance sheet.

Construction and Equipment (Account 61)

This account should show the amount of capital funds expended each period for construction and equipment. Charges to this account are obtained from—

(1) Register of vouchers
(2) Register of pay-rolls
(3) Register of assessments

At the end of the month the construction and equipment which has been completed is closed into Capital Surplus account, and should also be entered on the property records of the city.

Real Estate (Account 62)

This account is opened to show the amount of real estate purchased. It is charged with the amount of real estate purchased, with judgments recovered, and with mandamuses awarded. When the purposes for which the real estate account was opened have been fulfilled, it is closed into Capital Surplus account. Until then it is offset by a reserve in Part 2 of the capital fund balance sheet.

Due to Other Funds—Special and Trust Funds (Account 66)

This account is operated to show the amount due to special and trust funds. It is credited for the amount of improvements assessed against the city as shown by the register of assessments, and charged when transfers of capital fund cash are made to the special and trust funds. The balance is set up as a current liability in Part 2 of the capital fund balance sheet.

Construction Bonds (Account 67)

This account shows the amount of the principal of the city debt. It is credited when construction bonds are sold and charged when they are redeemed. The balance is set up as a liability on Part 2 of the capital fund balance sheet.

Construction and Equipment Reserve (Account 68)

This account is opened to provide an offset to the Con-

struction and Equipment account. It is charged or credited for an amount sufficient to make the reserve equal in amount to the balance to Construction and Equipment. The balance to Construction and Equipment Reserve account is set up under the caption "Reserves" in Part 2 of the capital fund balance sheet.

Real Estate Reserve (Account 69)

This account, which is opened for the purpose of establishing a reserve to the Real Estate account, is similar in principles to the Construction and Equipment Reserve account, and operated on the same lines.

Capital Surplus (Account 70)

This account should show the amount by which assets exceed liabilities in the capital fund group of accounts. It is credited for any revenues which have accrued to the capital funds, and charged with—

(1) Completed construction and equipment transferred to property records of the city
(2) Reserves set up for construction and equipment in process
(3) Reserves set up for real estate purchases
(4) Operating and maintenance expenses

The balance of the Capital Surplus account is set up as the last item in the capital fund balance sheet.

ACCOUNTS SET UP IN THE SINKING FUND BALANCE SHEET

Sinking Fund Requirements (Account 71)

This account is operated to show the amount of sinking fund requirements unprovided for. It is charged with—

(1) Annual instalments required to liquidate the bonded debt at maturity

(2) Amounts required to meet interest payments on the bonded debt

(3) Amortization of premiums on sinking fund investments

It is credited with—

(1) Amount of contributions received from the current fund

(2) Accruals to the sinking fund

The balance is set up as the first item on Part 1 of the sinking fund balance sheet.

Reserve Required to Meet Bonded Debt at Maturity (Account 74)

This account is set up to show the amount necessary to liquidate the bonded debt. It is credited with the amount of annual contributions required, and charged with the amount of vouchers which are drawn to liquidate the bonded debt. The balance is set up as a reserve in Part 2 of the sinking fund balance sheet.

Reserve Required to Meet Interest on Bonded Debt (Account 75)

This account shows the amount of interest due but unpaid on the bonded debt. It is credited with the amount of interest payable, and charged when vouchers are drawn liquidating the interest payable. The balance is set up under the caption "Reserves" in Part 1 of the sinking fund balance sheet.

Investments—Sinking Fund (Account 77)

This account is designed to show the par value of investments on hand belonging to the sinking fund. It is charged with the par value of investments purchased, and credited with their par value when sold. The balance of this

investments account is set up as the second item in Part 2 of the sinking fund balance sheet.

Premiums on Sinking Fund Investments (Account 78)

This account shows the amount of premium paid on sinking fund investments. It is charged for the premium paid when investments are purchased, and credited with the amortization of the premiums. Its balance is set up as the third item in Part 2 of the sinking fund balance sheet.

Interest Receivable (Account 80)

This account is operated to show the amount of interest due to the sinking fund. It is charged when interest accrues and credited as interest is collected. The balance is set up under the caption "Revenues Receivable" in Part 2 of the sinking fund balance sheet.

Sundry Sinking Fund Accounts

The illustrative ledger accounts of Chapter XX show the usual procedure for the following sinking fund accounts. The principles involved are similar to those already described in detail in connection with the appropriation accounts.

Unapplied Surplus (Account 72)
Available Cash Surplus (Account 73)
Cash—Sinking Fund (Account 76)
Accounts Receivable (Account 79)
Vouchers Payable—Sinking Fund (Account 81)

Sinking Fund Surplus (Account 82)

This account shows the excess of sinking fund assets over sinking fund liabilities. It is credited—

(1) When contributions are received from the current fund
(2) With revenues accruing to the sinking fund

It is charged with—

(1) Amount of the city debt and interest liquidated
(2) Amortization of premiums on sinking fund investments

The balance is set up on both parts of the sinking fund balance sheet.

Accounts Set Up in the Special and Trust Fund Balance Sheet

Special and Trust Fund Requirements (Account 83)

This account shows the special and trust fund requirements. It is charged when special and trust fund authorizations are made, and credited with assessments levied against the property benefited or chargeable against capital funds. The balance is set up as the first item in Part 1 of the special and trust fund balance sheet.

Sundry Special and Trust Fund Accounts

The illustrative ledger accounts of Chapter XX show the usual procedure for the following special and trust fund accounts. The principles involved are similar to those described in detail in connection with the appropriation accounts.

Unapplied Surplus (Account 84)
Available Cash Surplus (Account 85)
Contracts Reserve—Special and Trust Funds (Account 87)
Open Market Orders Reserve—Special and Trust Funds (Account 88)
Cash (Account 89)
Accounts Receivable—Special Assessments (Account 91)

Vouchers Payable—Special and Trust Funds (Account 94)

Pay-Rolls Payable—Special and Trust Funds (Account 95)

Special and Trust Fund Authorizations (Account 86)

This account is operated to show the amount of special and trust funds authorized which remain unencumbered. It is credited with—

(1) Special and trust fund authorizations
(2) Bequests and legacies received

It is charged with—

(1) Contracts
(2) Open market orders
(3) Pay-rolls

The balance is set up under the caption "Authorizations and Reserves" in Part 1 of the special and trust fund balance sheet.

Securities and Properties in Trust (Account 90)

This account shows the amount of securities and properties held in trust. It is charged when securities and properties or bequests and legacies are received in trust, and credited when securities and properties are disposed of. The balance is set up under "Assets" in Part 2 of the special and trust fund balance sheet.

Due from Construction Funds (Account 92)

This account is designed to show the amount of local improvements remaining to be paid for from construction funds. It is charged with the amount of local improvements to be paid for from construction funds, and credited when capital fund moneys are paid into the special and trust fund. The balance is set up under "Assets" in Part 2 of the special and trust fund balance sheet.

Local Improvements (Account 93)

This account is operated to show the cost of local improvements for which assessments have not been levied. It is charged for the cost of local improvements, and credited when assessments are made against property owners or the city. The balance is set up under "Assets" in Part 2 of the special and trust fund balance sheet.

Unclaimed Salaries and Wages (Account 96)

This account shows the amount of unclaimed salaries and wages on hand. It is credited for tailings when they are received, and charged for tailings paid. The balance is set up under "Current Liabilities" in Part 2 of the special and trust fund balance sheet.

Deposits (Account 97)

This account shows the amount of deposits on hand for work which the city is to do. It is credited when deposits are received and charged when they are returned. The balance is set up under "Current Liabilities" in Part 2 of the special and trust fund balance sheet.

Assessment Bonds (Account 98)

This account is operated to show the amount of assessment bonds outstanding. It is credited with the amount of assessment bonds sold, and charged when they are liquidated. The balance is set up under "General Liabilities" in Part 2 of the special and trust fund balance sheet.

Securities and Properties in Trust Reserve (Account 99)

This account is set up as a reserve to offset the Securities and Properties in Trust account. It is charged or credited for an amount sufficient to make its balance equal the balance of the Securities and Properties in Trust account. The balance of the Securities and Properties in Trust Reserve

account is set up under the caption "General Liabilities" in Part 2 of the special and trust fund balance sheet.

Local Improvements Reserve (Account 100)

This account provides a reserve to offset the amount remaining in the Local Improvements account. It is charged or credited at the close of each accounting period with an amount sufficient to make it equal the Local Improvements account balance. The balance of the Local Improvements Reserve account is set up under "Liabilities" in Part 2 of the special and trust fund balance sheet.

Special Accounts Surplus (Account 101)

This account is designed to show the amount by which the assets exceed the liabilities in the special and trust fund. It is charged for—

(1) Amount of expense
(2) Local improvements
(3) Local improvements reserve, when the books are closed at the end of a period

Special Accounts Surplus is credited with the amount of revenue from—

(1) Special assessments
(2) Bequests and legacies

The balance of this account is set up under "Liabilities" in Part 2 of the special and trust fund balance sheet, so as to show—

(1) Amount of cash in excess of current liabilities
(2) Amount of general assets in excess of general liabilities

The surplus shown in Part 1 is the same in amount as that shown in Part 2 of the special and trust fund balance sheet.

Accounts Set Up in the Property Account Balance Sheet

Sundry Property Accounts

These following accounts are opened in order to set up the city's property. They are charged at the cost price when new property is acquired and credited at the cost price whenever property is parted with.

Land (Account 102)
Construction (Account 103)
Equipment (Account 104)
Work in Process (Account 105)
Local Improvements (Account 106)

Depreciation Accounts

The following accounts are set up as a reserve for depreciation. They are credited with the depreciation written off from city property, and charged for obsolete and worn-out property when junked.

Depreciation on Construction Reserve (Account 107)
Depreciation on Equipment Reserve (Account 108)

Property Account Surplus (Account 109)

This account is operated to show the value of city property remaining after deducting depreciation. It is credited with the property owned and charged with the depreciation on property.

All the property accounts appear on the property account balance sheet of a city.

Trial Balance

The preparation of a trial balance is facilitated by having sheets printed with a list of the accounts appearing on the general ledger.

CHAPTER XX

GENERAL LEDGER ACCOUNTS

CHART AND PRO FORMA ACCOUNTS

In order to illustrate the method of handling the accounts on the general ledger, a chart or exhibit of these accounts is given below. This exhibit is followed and supplemented by a sufficient number of detailed *pro forma* accounts to illustrate all the principles involved in operating the general ledger. The items in the *pro forma* accounts have been posted for the most part from the journal entries given in Chapter XVIII, and the number which precedes each item refers to the corresponding journal entry in that chapter. This enables the various transactions described in the earlier section of the book to be traced into the general ledger.

The accounts which appear on the chart are arranged and numbered in the order in which they naturally appear on the various balance sheets and supporting schedules. The *pro forma* accounts which appear later in the chapter are arranged and numbered in the same order. The number which follows each account on the chart gives the number of the *pro forma* account having the same title, or, if the account which appears on the chart is omitted from the *pro forma* ledger accounts, indicates a *pro forma* account which is operated in an analogous manner.

Chart of General Ledger Accounts

Current Fund Accounts

Part 1. Fund Accounts

Requirements and Surplus	Pro Forma Acct. No.
(1) Budget Requirements	1
(2) Special Revenue Bond Fund Requirements	1
(3) Unapplied Surplus	3
(4) Available Cash Surplus	4
Authorizations and Reserves	
(5) Appropriations—1914	5
(6) Special Revenue Bond Fund Authorizations	5
(7) Contracts Reserve—Appropriations	7
(8) Contracts Reserve—Special Revenue Bond Funds	7
(9) Open Market Orders Reserve—Appropriations	7
(10) Open Market Orders Reserve — Special Revenue Bond Funds	7
(11) Miscellaneous Claims Reserve — Appropriations	7
(12) Miscellaneous Claims Reserve — Special Revenue Bond Funds	7

Part 2. Proprietary Accounts

Assets	
(13) Cash	13
(14) Taxes Receivable—Real Estate—1914	14
(15) Taxes Receivable—Personal—1914	14
(16) Taxes Receivable—Poll—1914	14
(17) Taxes Receivable—Corporation	14
(18) Taxes Receivable—Special Franchise	14

(19) Taxes Receivable—Bank..... 14
(20) Reserve for Abatement of Taxes, 1914.... 20
(21) Departmental Accounts Receivable..... 14
(22) Insurance Prepaid..... 22
(23) Stores 22

Liabilities

(24) Vouchers Payable—Appropriations 24
(25) Vouchers Payable—Special Revenue Bond Funds 24
(26) Pay-Rolls Payable—Appropriations..... 24
(27) Pay-Rolls Payable—Special Revenue Bond Funds 24
(28) Judgments and Mandamuses Payable—Appropriations 24
(29) Judgments and Mandamuses Payable—Special Revenue Bond Funds..... 24
(30) Revenue Bonds (issued in anticipation of collection of 1914 taxes)..... 30
(31) Special Revenue Bonds (to be included in tax levy of 1915)..... 30
(32) Insurance Prepaid Reserve..... 32
(33) Stores Reserve..... 32
(34) Current Surplus..... 34

Revenue and Expense

(35) Revenue—General Government..... 35
(36) Abatement of Expense—General Government 36
(37) Revenue—Water Supply System..... 35
(38) Revenue—Electric Light System..... 35
(39) Revenue—Gas Supply System..... 35
(40) Revenue—Cemeteries and Crematories... 35
(41) Interest Received..... 35
(42) Expense—General Government..... 42

(43)	Expense—Water Supply System	42
(44)	Expense—Electric Light System	42
(45)	Expense—Gas Supply System	42
(46)	Expense—Cemeteries and Crematories	42
(47)	Interest Paid	42
(48)	Equipment and Tools	42
(49)	Work in Process	42
(50)	Suspense	42

Capital Fund Accounts

Part 1. Fund Accounts

		Pro Forma Acct. No.
Requirements and Surplus		
(51)	Construction Fund Requirements	1
(52)	Unapplied Surplus	3
(53)	Available Cash Surplus	4
Authorization and Reserves		
(54)	Construction Fund Authorizations	5
(55)	Contracts Reserve — Construction and Equipment	7
(56)	Contracts Reserve—Real Estate Purchases	7
(57)	Open Market Orders Reserve	7
(58)	Reserve for Awards—Condemnation Proceedings	7

Part 2. Proprietary Accounts

Assets		
(59)	Cash	13
(60)	Accounts Receivable	14
(61)	Construction and Equipment	61
(62)	Real Estate	61
Liabilities		
(63)	Vouchers Payable—Construction Funds	24

(64) Pay-Rolls Payable—Construction Funds.. 24
(65) Judgments Payable—Construction Funds. 24
(66) Due to Other Funds—Special and Trust Funds 66
(67) Construction Bonds..... 30
(68) Construction and Equipment Reserve..... 32
(69) Real Estate Reserve..... 32
(70) Capital Surplus..... 34

Sinking Fund Accounts

Part 1. Fund Accounts

Requirements and Surplus	Pro Forma Acct. No.
(71) Sinking Fund Requirements.....	1
(72) Unapplied Surplus.....	3
(73) Available Cash Surplus.....	4
Reserves	
(74) Reserve Required to Meet Bonded Debt at Maturity	74
(75) Reserve Required to Meet Interest on Bonded Debt	74

Part 2. Proprietary Accounts

Assets

(76) Cash—Sinking Fund..... 13
(77) Investments—Sinking Fund..... 77
(78) Premiums on Sinking Fund Investments.. 77
(79) Accounts Receivable..... 14
(80) Interest Receivable..... 14

Liabilities

(81) Vouchers Payable—Sinking Fund..... 24
(82) Sinking Fund Surplus..... 34

Special and Trust Fund Accounts

Part 1. Fund Accounts

	Pro Forma Acct. No.
Requirements and Surplus	
(83) Special and Trust Fund Requirements	1
(84) Unapplied Surplus	3
(85) Available Cash Surplus	4
Authorization and Reserves	
(86) Special and Trust Fund Authorizations	5
(87) Contracts Reserve — Special and Trust Funds	7
(88) Open Market Orders Reserve—Special and Trust Funds	7

Part 2. Proprietary Accounts

Assets	
(89) Cash	13
(90) Securities and Properties in Trust	90
(91) Accounts Receivable—Special Assessments	14
(92) Due from Construction Funds	92
(93) Local Improvements	61
Liabilities	
(94) Vouchers Payable — Special and Trust Funds	67
(95) Pay-Rolls Payable — Special and Trust Funds	24
(96) Unclaimed Salaries and Wages	96
(97) Depositors	96
(98) Assessment Bonds	30
(99) Securities and Properties in Trust Reserve	32
(100) Local Improvements Reserve	32
(101) Special Accounts Surplus	34

Property Accounts

Assets	Pro Forma Acct. No.
(102) Land	102
(103) Construction	102
(104) Equipment	102
(105) Work in Process	102
(106) Local Improvements	102
Reserves and Surplus	
(107) Depreciation on Construction Reserve	107
(108) Depreciation on Equipment Reserve	107
(109) Property Account Surplus	34

Pro Forma General Ledger Accounts*

(1)

Budget Requirements

1 Appropriations, 1914	$2,274,000	12a Unapplied Surplus Taxes Accrued	$1,200,000
		13a Unapplied Surplus Departmental Revenues Accrued	235,000
		15a Available Cash Surplus	125,000
		Licenses and Fines Collected	
		16a Available Cash Surplus	150,000
		Interest Received	
		Balance	564,000
	$2,274,000		$2,274,000

*Numbers at head of accounts correspond with those of the Chart of General Ledger Accounts on pages 232 to 237.

Numbers before items in pro forma accounts indicate the journal entries in Chapter XVIII, from which such items were posted.

(3)

Unapplied Surplus

12a Budget Requirements	$1,200,000	14a Available Cash Surplus	$359,000
Taxes Accrued		Revenues Collected	
13a Budget Requirements	235,000	17a Available Cash Surplus	200,000
Departmental Revenues Accrued		Temporary Loan	
		27a Available Cash Surplus	290,000
		Short-Term Bonds	
		Balance	586,000
	$1,435,000		$1,435,000

(4)

Available Cash Surplus

14a Unapplied Surplus	$359,000	5a Vouchers Liquidated	$516,000
Revenues Collected		6a Appropriations, 1914 Pay-Rolls Paid	264,000
15a Budget Requirements	125,000	7a Appropriations, 1914 Judgments Paid	15,000
Licenses and Fines Collected		23a Vouchers Liquidated	67,000
16a Budget Requirements	150,000	24a Special Revenue Bond Fund Authorizations	140,000
Interest Received		Pay-Rolls Paid	
17a Unapplied Surplus	200,000	25a Special Revenue Bond Fund Authorizations	8,000
Temporary Loan		Judgments Paid	
27a Unapplied Surplus	290,000	Balance	114,000
Short-Term Bonds			
	$1,124,000		$1,124,000

(5)

Appropriations, 1914

2	Contracts Reserve	$400,000	1	Budget Requirements	$2,274,000
3	Open Market Orders Reserve	375,000			
4	Miscellaneous Claims Reserve	220,000			
6a	Available Cash Surplus Pay-Rolls Paid	264,000			
7a	Available Cash Surplus Judgments Paid	15,000			
	Balance	1,000,000			
		$2,274,000			$2,274,000

(7)

Contracts Reserve—Appropriations

5a	Available Cash Surplus Contract Vouchers Liquidated	$175,000	2	Appropriations, 1914	$400,000
	Balance	225,000			
		$400,000			$400,000

(13)

Cash

14	Revenues Collected	$359,000	8	Vouchers, Pay-Rolls	$370,000
15	Licenses and Fines Collected	125,000	26	Judgments Paid	110,000
16	Interest Received	150,000		Balance	644,000
17	Revenue Bonds Temporary Loan	200,000			
27	Special Revenue Bonds Short-Term Bonds	290,000			
		$1,124,000			$1,124,000

(14)

Taxes Receivable—Real Estate—1914

12	Tax Levy	$750,000	14	Cash Taxes Collected	$130,000
			18	Reserve for Abatement of Taxes	5,000
				Balance	615,000
		$750,000			$750,000

(20)

Reserve for Abatement of Taxes, 1914

18	Taxes Abated	$10,000	12	Taxes Receivable	$50,000
	Balance	40,000			
		$50,000			$50,000

(22)

Insurance Prepaid

5	Vouchers Payable	$6,000	9	Insurance Premiums Expired	$1,000
23	Vouchers Payable	5,000		Balance	10,000
		$11,000			$11,000

(24)

Vouchers Payable—Appropriations

8	Cash	$210,000	5	Vouchers Audited for Payment	$516,000
	Balance	306,000			
		$516,000			$516,000

(30)

Revenue Bonds (Issued in Anticipation of Collection of 1914 Taxes)

			17	Cash	$200,000

(32)

Insurance Prepaid Reserve

			30	Current Surplus	$10,000

(34)

Current Surplus

30	Sundries	$910,000	30	Sundries	$1,610,000
	Balance	700,000			
		$1,610,000			$1,610,000

(35)

Revenue—General Government

30	Surplus	$1,325,000	12a	Revenue	$1,200,000
			15	Cash	100,000
			15	Cash	25,000
		$1,325,000			$1,325,000

(36)

Abatement of Expense—General Government

29	Expense General Government	$100,000	16	Cash	$100,000

(42)

Expense—General Government

5	Vouchers Payable	$75,000	11	Work in Process	$100,000
6	Pay-Rolls Payable	75,000	29	Abatement of Expense	100,000
9	Insurance Prepaid	300	30	Current Surplus	530,300
10	Stores	5,000			
23	Vouchers Payable	20,000			
24	Pay-Rolls Payable	100,000			
28	Sundries Expenses	455,000			
		$730,300			$730,300

(61)

Construction and Equipment

36	Vouchers Payable	$10,000	44	Capital Surplus	$10,000
37	Pay-Rolls Payable	10,000		Balance	15,000
43	Due to Other Funds	5,000			
		$25,000			$25,000

(66)

Due to Other Funds—Special and Trust

		43 Construction and Equipment	$5,000

(74)

Reserve Required to Meet Bonded Debt at Maturity

51	Available Cash Surplus	$5,000	46	Sinking Fund Requirements	$50,000
	Balance	45,000			
		$50,000			$50,000

(77)

Investments—Sinking Fund

49	Vouchers Payable	$5,000			

(90)

Securities and Properties in Trust

68	Securities and Properties in Trust			Balance	$40,000
	Reserve	$5,000			
69	Revenue — General Government	35,000			
		$40,000			$40,000

(92)

Due from Construction Funds

62a	Local Improvements	$5,000			

(96)

Unclaimed Salaries and Wages

		66 Cash	$500

(102)

Land

71 Property Account Surplus	$5,000		

(107)

Depreciation on Construction Reserve

		71 Property Account Surplus	$375

CHAPTER XXI

BALANCE SHEETS AND SUPPORTING SCHEDULES

General Ledger Accounts Classified

The data of the general ledger accounts may be classified as follows:

(1) Information pertaining to the city in its funding capacity, found in the fund accounts.
(2) Information relating to the city in its proprietary capacity, found in the proprietary accounts.
(3) Information regarding a city's gross and net income, found in the revenue and expense accounts.

The fund accounts give the unencumbered balances of appropriations and bond fund authorizations; the proprietary accounts show the city's assets and liabilities; and the revenue and expense accounts, the transactions for each period.

Balance Sheets Classified

The three classes of general ledger accounts mentioned, when set up in balance sheet form with supporting schedules, make up six complete sets, as follows:

(1) Current Fund Balance Sheet
(2) Capital Fund Balance Sheet
(3) Sinking Fund Balance Sheet
(4) Special and Trust Fund Balance Sheet
(5) Property Account Balance Sheet
(6) Consolidated Balance Sheet

Current Fund Balance Sheet

Part 1. Fund Accounts

(*a*) *Requirements and Surplus.* The current fund accounts pertaining to requirements and surplus are set up on Part 1 of the current fund balance sheet, as shown in Chapter XXII. They consist of budget requirements and special revenue bond fund requirements. The surplus is divided to show the unapplied surplus (accounts receivable in excess of temporary loans), and the available cash surplus (cash in excess of current liabilities).

(*b*) *Authorizations and Reserves.* Fund accounts showing the current account authorizations and reserves are also set up on Part 1 of the current fund balance sheet. They consist of the unencumbered balances of appropriations and special revenue bond fund authorizations. The reserves consist of the outstanding contracts, open market orders, and miscellaneous claims for which vouchers have not been drawn.

Part 2. Proprietary Accounts

(*a*) *Assets.* Cash and accounts receivable are set up as shown on Part 2 of the current fund balance sheet. The reserve for abatement of taxes is deducted from the accounts receivable in order to state the latter net. The balances of Insurance Prepaid and Stores accounts are offset by the reserves set up for that purpose and shown under "Liabilities" on the balance sheet.

(*b*) *Liabilities.* Vouchers payable, pay-rolls payable, and judgments and mandamuses payable are included under the caption "Current Liabilities." Revenue bonds and special revenue bonds are covered by the caption "Temporary Loans." The surplus is stated in two parts as in the fund accounts, and the amount of surplus shown on Part 2 is the

same as that shown on Part 1 of the current fund balance sheet.

Current Fund Surplus

Revenue accruing to the current fund from taxes, licenses and permits, fines, and forfeits, and the various departments, is set up in the supporting schedules of the current fund balance sheet.

The operating and maintenance expenses of the general and commercial departments of a city are deducted from the revenue in order to arrive at the surplus earned for the period. In setting up the analysis of the current fund surplus, the miscellaneous revenues applicable to the abatement of expense are deducted from the general government expense so as to show the net expense for the period. The surplus or deficit for the general government is first shown, and then that for the commercial departments. The total of the current fund surplus shown agrees with that shown on Parts 1 and 2 of the current fund balance sheet.

Capital Fund Balance Sheet

Part 1. Fund Accounts

(*a*) *Requirements and Surplus.* The balances to the construction fund requirements and surplus accounts are set up on Part 1 of the capital fund balance sheet. The surplus is divided into unapplied surplus—accounts receivable in excess of amounts due to the funds and construction bonds —and available cash surplus, or cash in excess of current liabilities.

(*b*) *Authorizations and Reserves.* The balances to the construction fund authorizations and reserves accounts are also set up on Part 1 of the capital fund balance sheet. They include contracts for construction and equipment, real estate purchases, open market orders, and reserves for awards.

Part 2. Proprietary Accounts

(*a*) *Assets.* Assets applicable to the payment of capital fund liabilities are set up on Part 2 of the capital fund balance sheet. Cash and accounts receivable are brought in first. The property accounts for construction and equipment, and real estate purchases, are offset by reserves.

(*b*) *Liabilities.* Vouchers payable, pay-rolls payable, and judgments payable are set up under current liabilities on Part 2 of the capital fund balance sheet. "Due to Other Funds" balance is a capital liability. Construction bonds are also a liability. The surplus is divided as in the fund accounts. The surplus shown on Part 2 is the same in amount as that shown on Part 1 of the capital fund balance sheet.

Sinking Fund Balance Sheet

Part 1. Fund Accounts

(*a*) *Requirements and Surplus.* The fund accounts pertaining to the sinking fund requirements and surplus are set up on Part 1 of the sinking fund balance sheet. The surplus is divided as in the case of the similar accounts previously described to show the amount of the unapplied surplus and the available cash surplus.

(*b*) *Reserves.* Two reserve accounts appear in this division of the sinking fund balance sheet, the first showing the amount required to meet the bonded debt at maturity, and the second the amount required to meet the interest on the bonded debt.

Part 2. Proprietary Accounts

(*a*) *Cash and Investments.* The cash and investments belonging to the sinking fund are set up in Part 2 of the sinking fund balance sheet, the investment items being so divided as to show the investment at par and the premiums paid.

(*b*) *Revenues Receivable.* Revenues from the rent of markets, and interest on investments which have accrued to the sinking fund but which remain uncollected, follow "Cash and Investments" on Part 2 of the sinking fund balance sheet.

(*c*) *Liabilities.* "Vouchers Payable" and "Surplus" are set up under the head of liabilities on Part 2 of the sinking fund balance sheet. Surplus is divided into:

(1) Cash and investments in excess of vouchers payable
(2) Revenues receivable

and the total surplus shown on Part 2 is the same as that shown on Part 1 of the sinking fund balance sheet.

Special and Trust Fund Balance Sheet

Part 1. Fund Accounts

Part 1 of the special and trust fund balance sheet has two main divisions—"Requirements and Surplus" and "Authorizations and Reserves." The former is divided into unapplied surplus and available cash surplus, and the latter is divided into "Special Trust Fund Authorizations" and "Reserves", "Reserves" being again divided into "Contracts Reserve" and "Open Market Orders Reserve."

Part 2. Proprietary Accounts

(*a*) *Assets.* The cash, securities, and book accounts belonging to the special and trust fund are set up on Part 2 of the special and trust fund balance sheet, the local improvements shown under assets being offset by a reserve under liabilities.

(*b*) *Liabilities.* The vouchers, pay-rolls, unclaimed salaries, and wages, and depositors payable out of special and trust funds are set up on Part 2 of the trust fund balance sheet under the head of current liabilities. The general

liabilities include assessment bonds and the securities and properties in trust reserve. The surplus shown under liabilities is divided to show the cash in excess of current liabilities (available cash surplus), and general assets in excess of general liabilities (unapplied cash surplus).

Property Account Balance Sheet

The value of property owned by the city is set up on the property account balance sheet. The reserve for depreciation is deducted from the total.

Consolidated Balance Sheet

Part 1. Fund Accounts

(*a*) *Requirements and Surplus.* A summary of the requirements and surplus accounts appearing on the fund account balance sheets is made in order to set up Part 1 of the consolidated balance sheet. The surplus is divided to show the unapplied surplus (accounts receivable, and securities and properties in trust in excess of loans), and available cash surplus (cash and securities in excess of current liabilities.

(*b*) *Authorizations and Reserves.* A summary is made of the authorizations and reserves appearing on the various fund account balance sheets, and this is set up on the consolidated balance sheet as shown in Chapter XXII.

Part 2. Proprietary Accounts

(*a*) *Assets.* All the assets of the city are set up on Part 2 of the consolidated balance sheet, the cash and securities appearing first, followed by the accounts receivable. The reserve for abatement of taxes is deducted from the taxes receivable in order to arrive at the estimated net taxes collectable. The reserve for depreciation is deducted from the total property value in order to show the net value of the

city's property. Insurance prepaid and stores are offset by reserves in order that the surplus shown may be exactly equal to the difference between the assets applicable to the payment of liabilities and the actual liabilities.

(*b*) *Liabilities.* The city's liabilities are set up under the head of "Current Liabilities" and "Loans." The amount of the surplus is stated under three heads:

(1) Cash and securities in excess of current liabilities (available cash surplus)
(2) Accounts receivable, and securities and properties in trust in excess of loans (unapplied surplus)
(3) Property account surplus

Consolidated Surplus Account

The surpluses appearing on the various balance sheets of the city are set up on the Consolidated Surplus account, the total of these agreeing with the surplus of the consolidated balance sheet.

Illustrative Balance Sheets

The set of balance sheets given in the following chapter shows the method of preparing exhibits of a city's financial condition. The arrangement of accounts is the same as in the general ledger. The statements can be condensed or expanded to meet local conditions. The supporting schedules suggest an arrangement of the various revenues and expenses to agree with the surplus as shown on the balance sheets.

CHAPTER XXII

BALANCE SHEETS AND SUPPORTING SCHEDULES—FORMS

CURRENT FUND SURPLUS

Month Ending January 31, 1914

Revenue—General Government		$1,325,000	
Expense—General Government	$630,300		
Less Abatement of Expense	100,000		
	$530,300		
Insurance	10,000		
Stores	150,000	690,300	$634,700
Revenue—Water Supply System		$70,000	
Expense—Water Supply System		63,300	6,700
Revenue—Electric Light System		$55,000	
Expense—Electric Light System		53,200	1,800
Revenue—Gas Supply System		$57,000	
Expense—Gas Supply System		52,200	4,800
Revenue—Cemeteries and Crematories		$53,000	
Expense—Cemeteries and Crematories		41,000	12,000
Interest Received		$50,000	
Interest Paid		10,000	40,000
Current Surplus Per Current Fund Balance Sheet			$700,000

CURRENT FUND BALANCE SHEET

PART I. FUND ACCOUNTS

January 31, 1914

Requirements and Surplus		
Requirements		
Budget Requirements	$564,000	
Special Revenue Bond Fund Requirements	300,000	$864,000
Surplus		
Unapplied Surplus	$586,000	
Available Cash Surplus	114,000	700,000
Total		$1,564,000
Authorizations and Reserves		
Authorizations		
Appropriations	$1,000,000	
Special Revenue Bond Fund Authorizations	45,000	$1,045,000
Reserves		
Contracts Reserve—Appropriations	$225,000	
Contracts Reserve—Special Revenue Bond Funds	30,000	
Open Market Orders Reserve—Appropriations	204,000	
Open Market Orders Reserve—Special Revenue Bond Funds	9,000	
Miscellaneous Claims Reserve—Appropriations	50,000	
Miscellaneous Claims Reserve—Special Revenue Bond Funds	1,000	519,000
Total		$1,564,000

CURRENT FUND

PART 2. PRO

January

ASSETS		
Cash		$644,000
Accounts Receivable		
Taxes—Real Estate, 1914	$615,000	
Taxes—Personal, 1914	132,000	
Taxes—Poll, 1914	123,000	
Taxes—Corporation	10,000	
Taxes—Special Franchise	4,000	
Taxes—Bank	12,000	
	$896,000	
Less Reserve for Abatement of Taxes	40,000	
	$856,000	
Departmental Accounts	220,000	1,076,000
Suspense		
Insurance Prepaid	$10,000	
Stores	150,000	160,000
Total		$1,880,000

BALANCE SHEET

PRIETARY ACCOUNTS

31, 1914

	LIABILITIES	
Current Liabilities		
Vouchers Payable—Appropriations	$306,000	
Vouchers Payable—Special Revenue Bond Funds	65,000	
Pay-Rolls Payable—Appropriations	114,000	
Pay-Rolls Payable—Special Revenue Bond Funds	37,000	
Judgments and Mandamuses Payable—Appropriations	5,000	
Judgments and Mandamuses Payable—Special Revenue Bond Funds	3,000	$530,000
Temporary Loans		
Revenue Bonds	$200,000	
Special Revenue Bonds	290,000	490,000
Reserves		
Insurance Prepaid Reserve	$10,000	
Stores Reserve	150,000	160,000
Current Surplus		
Cash in Excess of Current Liabilities	$114,000	
Accounts Receivable in Excess of Temporary Loans	586,000	700,000
Total		$1,880,000

CAPITAL FUND BALANCE SHEET

January 31, 1914

PART 1. FUND ACCOUNTS

REQUIREMENTS AND SURPLUS			AUTHORIZATIONS AND RESERVES		
Construction Fund Requirements		$30,000	Construction Fund Authorizations		$25,000
Surplus			*Reserves*		
Unapplied Surplus	$10,000		Contracts Reserve—Construction and Equipment	$5,000	
Available Cash Surplus	10,000	20,000	Contracts Reserve—Real Estate Purchases	5,000	
			Open Market Orders Reserve	5,000	
			Reserve for Awards	10,000	25,000
Total		$50,000	Total		$50,000

PART 2. PROPRIETARY ACCOUNTS

ASSETS			LIABILITIES		
Cash		$30,000	*Current Liabilities*		
Accounts Receivable		35,000	Vouchers Payable	$5,000	
Property			Pay-Rolls Payable	11,000	
Construction and Equipment	$15,000		Judgments Payable	4,000	$20,000
Real Estate	5,000	20,000			
			Due to Other Funds		5,000
			Construction Bonds		20,000
			Reserves		
			Construction and Equipment Reserve	$15,000	
			Real Estate Reserve	5,000	20,000
			Capital Surplus		
			Cash in Excess of Current Liabilities	$10,000	
			Accounts Receivable in Excess of Amounts Due to Other Funds and Construction Bonds	10,000	20,000
Total		$85,000	Total		$85,000

SINKING FUND BALANCE SHEET

January 31, 1914

Part 1. Fund Accounts

Requirements and Surplus			Reserves		
Sinking Fund Requirements		$39,250	Reserves Required to Meet Bonded Debt at Maturity		$45,000
Surplus			Reserve Required to Meet Interest on Bonded Debt		4,000
Unapplied Surplus	$3,500				
Available Cash Surplus	6,250	9,750			
Total		$49,000	Total		$49,000

Part 2. Proprietary Accounts

Assets			Liabilities		
Cash and Investments			Vouchers Payable		$4,000
Cash	$4,500		*Surplus*		
Investments	5,000		Cash and Investments in Excess of Vouchers Payable	$6,250	
Premiums on Investments	750	$10,250	Revenues Receivable	3,500	9,750
Revenues Receivable					
Accounts Receivable	$3,000				
Interest Receivable	500	3,500			
Total		$13,750	Total		$13,750

SPECIAL AND TRUST
January

PART 1.

REQUIREMENTS AND SURPLUS		
Special and Trust Fund Requirements		$20,000
Surplus		
Unapplied Surplus	$5,000	
Available Cash Surplus	10,000	15,000
Total		$35,000

PART 2.

ASSETS		
Cash		$51,500
General		
Securities and Properties in Trust	$40,000	
Accounts Receivable—Special Assessments	15,000	
Due from Construction Funds	5,000	60,000
Local Improvements		12,000
Total		$123,500

FUND BALANCE SHEET

31, 1914

FUND ACCOUNTS

AUTHORIZATIONS AND RESERVES		
Special and Trust Fund Authorizations		$30,000
Reserves		
Contracts Reserve	$2,000	
Open Market Orders Reserve	3,000	5,000
Total		$35,000

PROPRIETARY ACCOUNTS

LIABILITIES		
Current Liabilities		
Vouchers Payable	$27,000	
Pay-Rolls Payable	13,000	
Unclaimed Salaries and Wages	500	
Depositors	1,000	$41,500
General		
Assessment Bonds	$50,000	
Securities and Properties in Trust Reserve	5,000	55,000
Local Improvements Reserve		12,000
Special Accounts Surplus		
Cash in Excess of Current Liabilities	$10,000	
General Assets in Excess of General Liabilities	5,000	15,000
Total		$123,500

CONSOLIDATED
January

PART 1.

	REQUIREMENTS AND SURPLUS	
Requirements		
Budget Requirements	$564,000	
Special Revenue Bond Fund Requirements	300,000	
Construction Fund Requirements	30,000	
Sinking Fund Requirements	39,250	
Special and Trust Fund Requirements	20,000	$953,250
Surplus		
Unapplied Surplus	$604,500	
Available Cash Surplus	140,250	744,750
Total		$1,698,000

PART 2.

	ASSETS	
Cash and Securities		
Cash	$730,000	
Investments	5,000	
Premium on Investments	750	$735,750
Accounts Receivable		
Taxes—Real Estate, 1914	$615,000	
Taxes—Personal, 1914	132,000	
Taxes—Poll, 1914	123,000	
Taxes—Corporation	10,000	
Taxes—Special Franchise	4,000	
Taxes—Bank	12,000	
	$896,000	
Less Reserve for Abatement of Taxes	40,000	
	$856,000	
Departmental Accounts		
General	220,000	
Docks and Ferries	35,000	
Markets	3,000	
Assessments	15,000	
Interest	500	
Due from Capital Funds	5,000	1,134,500
Securities and Properties in Trust		35,000
Property	$57,000	
Less Depreciation		
Construction $375		
Equipment 250	625	56,375
Suspense		
Insurance Prepaid	$10,000	
Stores	150,000	160,000
Total		$2,121,625

BALANCE SHEET

31, 1914

Fund Accounts

Authorizations and Reserves		
Authorizations		
Appropriations	$1,000,000	
Special Revenue Bond Fund Authorizations	30,000	
Construction Fund Authorizations	25,000	
Special and Trust Fund Authorizations	30,000	$1,085,000
Reserves		
Contract Reserve	$282,000	
Open Market Orders Reserve	221,000	
Miscellaneous Claims Reserve	51,000	
Reserve for Awards	10,000	
Reserve Required to Meet Bonded Debt	45,000	
Reserve Required to Meet Interest on Debt	4,000	613,000
Total		$1,698,000

Proprietary Accounts

Liabilities		
Current Liabilities		
Vouchers Payable	$407,000	
Pay-Rolls Payable	175,000	
Judgments and Mandamuses Payable	12,000	
Unclaimed Salaries and Wages	500	
Due Depositors	1,000	$595,500
Loans		
Revenue Bonds	$200,000	
Special Revenue Bonds	290,000	
Assessment Bonds	50,000	
Construction Bonds	20,000	
Due to Special and Trust Funds	5,000	565,000
Reserves		
Insurance Prepaid Reserve	$10,000	
Stores Reserve	150,000	160,000
Surplus		
Cash and Securities in Excess of Current Liabilities	140,250	
Accounts Receivable and Securities and Properties in Trust in Excess of Loans	604,500	
Property Account Surplus	56,375	801,125
Total		$2,121,625

CONSOLIDATED SURPLUS ACCOUNT

Month Ending January 31, 1914

Surplus—Current Fund		
General Government	$634,700	
Water Supply System	6,700	
Electric Light System	1,800	
Gas Supply System	4,800	
Cemeteries and Crematories	12,000	
Interest	40,000	$700,000
Surplus—Capital Fund		20,000
Surplus—Sinking Fund		9,750
Surplus—Special and Trust Funds		15,000
Surplus—Property Account		56,375
Surplus per Consolidated Balance Sheet		$801,125

The method of preparing the Consolidated Surplus account is to assemble the various surplus accounts shown on the different balance sheets. There are five of these accounts set up to show the aggregate surplus for the period covered by the statement. Reference to the above exhibit indicates the method of preparing the Consolidated Surplus account, which agrees in amount with the surplus shown on the consolidated balance sheet.

PROPERTY ACCOUNT BALANCE SHEET

January 31, 1914

Cost to Date		
Land	$5,000	
Construction	7,500	
Equipment	2,500	
Work in Process	15,000	
Local Improvements	27,000	$57,000
Depreciation Reserve		
Construction	$375	
Equipment	250	625
Net Amount		$56,375
Property Account Surplus		$56,375

CHAPTER XXIII

SUBSIDIARY LEDGERS

Purpose

The subsidiary ledgers when properly operated form an invaluable accounting device for making an analysis of general ledger accounts. They also serve to maintain an internal check on the general ledger not otherwise obtainable; and the controlling accounts and subsidiary ledgers taken together form a most satisfactory system for preventing mistakes and proving the accuracy of work performed.

The Subsidiary Ledgers Classified

The subsidiary ledgers which may be operated in connection with the general ledger of a city are as follows:

(1) Appropriation Ledger
(2) Bond Fund Ledger
(3) Contract Ledger
(4) Claimants Ledger
(5) Customers Ledger
(6) Departmental Expense Ledger
(7) Stores Ledger*
(8) Property Ledger
(9) Equipment Ledger
(10) Live Stock Ledger
(11) Depositors Ledger

* See Chapter XII for description of stores ledgers.

Either loose-leaf books or card systems can be used for the keeping of subsidiary ledger records. Local conditions must to a large extent govern the selection of the proper devices for handling a city's records.

(1) Appropriation Ledger (Form 68)

The subsidiary appropriation ledger is set up from the printed budget, a separate account being opened for each appropriation. Space is allowed on the ledger page for the account number and a detailed description of the appropriation. The amount of the appropriation for the year is entered on the credit side of the ledger. Every encumbrance on budget appropriations must be entered on the debit side of the proper appropriation account, these encumbrances consisting of contracts, open market orders, miscellaneous claims, judgments and mandamuses, and pay-rolls. Charges are posted from the original documents to prevent mistakes.

Proof of the correctness of the appropriation ledger balances is obtained by taking off a trial balance and comparing it with the balance of the controlling account in the general ledger.

(2) Bond Fund Ledger (Form 69)

The bond fund ledgers required in municipal accounting are of three classes:

(1) Special Revenue Bond Fund Ledger
(2) Construction Fund Ledger
(3) Special and Trust Fund Ledger

As soon as bond fund authorizations have been approved, they are set up on the proper bond fund ledger, or ledgers. The ledger page for the bond fund ledger is much the same as that for the appropriation ledger, with the exception of the main heading, which gives the name of the bond fund. A description of the bond fund authorization and the ac-

count number are entered in the space provided in the upper part of the ledger sheet. The date and amount of the authorization are entered on the credit side of the proper bond fund ledger account.

All contracts, open market orders, miscellaneous claims, judgments and mandamuses, and pay-rolls, which encumber bond fund authorizations, must be entered on the debit side of the proper bond fund ledger account. Original documents are used as a posting medium to prevent mistakes. The bond fund ledgers are proved by taking off a trial balance and comparing it with the balances of the controlling accounts in the general ledger.

(3) Contract Ledger (Form 70)

The contract ledger furnishes complete information in regard to each contract entered into by the city. Provision is made in the page heading for full details regarding the contract, which are entered as soon as the contract is approved. All orders issued against contracts are entered on the left side of the contract ledger, and vouchers liquidating contract orders on the right. The final column on the right provides for showing the particular order liquidated. The contract ledgers are proved by taking off a trial balance and comparing it with the balance of the controlling account in the general ledger.

(4) Claimants Ledger (Form 71)

As soon as agreements have been made by the city with a vendor, they must be set up on the claimants ledger. The claimants' names are written on the ledger sheet, together with the amount of the contract or agreement.

Charges against claimants ledger accounts are made when claims are vouchered. The amount of the voucher is entered in the proper column. At the close of each month it is necessary to reconcile the balances of claimants ledger

accounts with the controlling claimants accounts on the general ledger in order to prove the accuracy of the clerical work.

(5) Customers Ledger (Form 72)

Any charges made against customers by departments should be entered in the charge columns of the customers ledger, and when remittances are received from customers, they should be posted to the credit columns. The total of the balances of the customers ledger accounts agrees with the balance of the controlling general ledger account.

(6) Departmental Expense Ledger (Form 73)

The form for the departmental expense ledger provides only for the entry of charges. If a credit entry is necessary it is distinguished by being entered in red ink. The ledger form provides for the classification of expenditures according to a complete code of accounts, the classification and account number being entered at the top of the form. Columns are provided for the date, reference number, description of item, and amount of charge.

The charges to the departmental expense ledger are entered from the pay-roll analysis, invoices, stores requisitions, and cost summary sheets. The total charges must agree in amount with the similar charges for the corresponding period in the general ledger. At the close of each accounting period a statement is prepared, showing the departmental expenditures arranged according to proper functional account classifications.

(8) Property Ledger (Form 74)

The property owned by a city should be recorded in a subsidiary ledger so that a detailed statement may be readily prepared. The property ledger provides space enough for entering a complete description of each piece of property

owned. Charges are entered in detail on the property ledger when purchases are made, and credits are entered when property is sold or otherwise disposed of.

(9) Equipment Ledger (Form 75)

The equipment ledger provides a ready means of preparing and checking the inventory of equipment. When equipment is acquired, a record of it should be made on the debit side of the equipment ledger. If any part of it is disposed of the proper entry should be made on the credit side. The inventory balance shown on the equipment ledger should be reconciled with a physical inventory taken annually, and any discrepancies adjusted.

(10) Live Stock Ledger (Form 76)

Details regarding the live stock acquired by a city should be entered on the live stock ledger. Full particulars regarding the color, sex, age, etc., are entered under the caption "Description." The particulars of purchase or acquisition should be entered in the column headed "Details of Purchase." When live stock is disposed of for any reason whatever, full details should be entered under the caption "Final Disposal." The reverse side of the live stock ledger sheet or card can be used for keeping general data—as in the case of horses, when they are shod, etc. As soon as an animal is disposed of, the live stock record should be removed from the active file and placed in the transfer file.

(11) Depositors Ledger (Form 72)

Moneys deposited with the city as security for work to be done are entered on the credit side of the depositors ledger. When the work for the city has been completed, the amount of the bill is deducted from the deposit and the balance returned to the depositor. The depositors accounts are subsidiary to a controlling account in the general ledger.

CHAPTER XXIV

DETAILED STATEMENTS

In order to supply the information necessary for the proper administration of city affairs, detailed statements may be prepared as follows:

(1) Comparative Statement of Budget Allowances and Expense Accounts
(2) Statement of the Condition of Appropriations
(3) Statement of the Condition of Bond Funds
(4) Statement of the Condition of Contracts
(5) Statement of Departmental Expense

These detailed statements accompany the balance sheets and support the related amounts shown therein.

(1) Comparative Statement of Budget Allowances and Expense Accounts (Form 77)

A very useful statement can be made for administrative purposes by setting up the budget allowances and expense accounts in parallel columns. The first columns of the illustrative form are devoted to appropriations showing the amount allowed in the budget, and any transfers made. Other columns show the pro rata amount of the budget allowed, as adjusted for the period, and the balances on the expense ledger. The difference between the total allowance as adjusted and the expense ledger balance gives the balance of appropriations remaining on an expense ledger basis. As the end of the year approaches, the comparative statement

of budget allowances and expense accounts shows if there is any probability of an overdraft.

(2) Statement of the Condition of Appropriations (Form 78)

The detailed statement used to show the unencumbered appropriation balances, gives the appropriations, the vouchers registered, and unexpended balances. The total encumbrances deducted from the total authorizations gives the present unencumbered balance. It is very important that this statement be prepared accurately, as a severe penalty is usually imposed upon an officer who approves claims in excess of an appropriation.

(3) Statement of the Condition of Bond Funds (Form 79)

The detailed statement of unencumbered bond funds is prepared in the same way as that for unencumbered appropriation balances. The form is the same for special revenue bond fund authorizations, capital fund authorizations, and special and trust fund authorizations. The total amount of unencumbered bond fund balances must agree with the amounts shown on the bond fund balance sheets.

(4) Statement of the Condition of Contracts (Form 80)

The detailed statement exhibiting the condition of contracts shows the total amount of each contract, the vouchers registered against it, and the balance remaining.

(5) Statement of Departmental Expense

An analysis of departmental expense should follow the activities or functions of the various departments of the city. This analysis is obtained from the subsidiary expense ledgers, in which there are as many divisions as there are functions to be reported. Thus in a health department the major functions to be reported are administration, promotion of

public health, laboratory service, and hospital service, each of which can be still further subdivided.

Unit Cost of Work Done

Cost statements can be prepared monthly from the departmental expense ledger (Form 73) showing the units of work done by each function or activity in a department, and the cost per unit. The cost statement should be made up as soon as the books have been closed for the month, and a summary of expenditures prepared. The units of work done, such as the number of visits by inspectors, number of patients treated, and average attendance at institutions, are obtained from the records in the various divisions of the health department. The unit cost can be obtained by dividing the units of work reported into the sum of the expenditure chargeable directly against the work done, to which has been added a pro rata part of the general overhead expenditure. This information is very desirable, as when costs are made comparative, they give an index of efficiency not otherwise obtainable.

Inventory of Equipment (Form 81)

An annual inventory should be made of articles and property owned by a city in order to verify records of equipment and adjust book figures. The necessary forms for this inventory, together with instructions for listing the equipment, should be sent to the heads of departments some time in advance of the date set for taking the inventory. The inventory sheet shown (Form 81) is provided with the following columns:

(1) Description of Property. Sufficient information must be given to identify property correctly.

(2) Purchase Order Number.

(3) Date Purchased. When the date of purchase or acquisition cannot be definitely determined, the approximate date may be inserted and marked with the prefix "(e)."

(4) Number of Units of Property described in Column 1.

(5) Cost Price. When the cost price is not known the estimated cost price can be stated and marked with the prefix "(e)."

(6) Total Cost. This is the product of the entries made in four and five, representing units and cost price respectively.

(7) Present Condition. "Good," "Fair" or "Poor," can be used to indicate the condition of the article or property described.

(8) Probable Remaining Life in Years. This gives the estimated remaining life of the article or property.

(9) Total Present Value. The amount remaining after deducting depreciation for the period intervening since the date of purchase or acquisition.

Depreciation

The difference between the "Total Cost" and "Total Present Value" as shown by the Inventory of Equipment (Form 81) gives the amount of depreciation reserve to be set up on the general ledger. An average of the annual amounts of depreciation should be taken as the basis for figuring depreciation when making up expense and cost statements.

It is essential that every possible effort be made to obtain a complete inventory of equipment belonging to a city, in

order to have a basis for the audit of returns from property sold, destroyed or otherwise disposed of.

Administrative Control

The appropriation and bond fund statements, expense reports, cost figures, and equipment inventory keep the administrative officers of a city informed regarding the condition of funds, cost of work done and present worth of equipment. The accuracy of the statements can be relied upon because they are under complete accounting control.

CHAPTER XXV

A CITY'S BORROWING CAPACITY

Municipal Borrowing

New issues of municipal securities are offered for sale almost daily, showing the tendency on the part of cities to hypothecate their revenues. This leads to a consideration of the difference between the borrowing powers and methods of a municipal corporation and a private enterprise, and of the conditions which limit or affect a city's borrowing capacity.

The object of all the transactions of a private enterprise is profit, while those of a city are carried on for the advancement of the public welfare. The property of a private enterprise is an asset which can be used for meeting liabilities; but city properties are not so available. When a private business negotiates a loan with bankers a statement of assets and liabilities is the basis for giving credit; but where a city wishes to borrow the basis of credit is its ability to pay interest, or the debt limit fixed by law. A private business is solvent when the assets are in excess of the liabilities. A municipality is solvent when the liabilities can be met without unduly increasing the rate of taxation.

Purpose of Bond Issues

The relation which revenues bear to the expense of government is of vital importance in municipal administration. When an excess of expense over revenue causes a deficit at the end of a year, the overdraft is ordinarily bonded.

Hence we hear of the "Ordinary City Debt Loan of 1913" bonds, and so on, which means that the deficit occurring at the end of the year 1913 has been transformed from a current liability into a bonded one. This bonding of yearly overdrafts, if allowed to continue, piles up enormous debts, which must ultimately be paid from revenues, and so puts on future taxpayers a heavy burden which should be borne by those enjoying the present benefits for which the obligations were incurred.

Other objects for which municipal expenditures are continually demanded are such municipal industries as water works, gas and electric light plants, tramways, and other enterprises. It is not to be expected that current revenues can or should meet the heavy initial costs of these public service enterprises, and so bond issues are authorized.

Limiting the Borrowing Power

Liberal views as to municipal expenditures are so common among city officials, and the propensity to borrow to meet these expenditures is so strong, that the legislatures of many states have passed laws limiting the borrowing capacity of their cities. These laws usually fix the debt limit at a certain per cent of the assessed valuation; and thus, as the valuation of a city's property becomes greater, the debt limit increases.

"Outside the Debt Limit"

A demand was early made that restrictions upon the borrowing power of a city should not apply to debts incurred for municipal industries; that expenditures for waterworks, street railways, and kindred enterprises which yield a revenue, should not be classed with expenditures for streets, sewers, parks, and school-houses. It is reasonable that such exemption should be granted to the expenditures for a public service enterprise, when this enterprise becomes

self-supporting, but not until then. When this condition is established for any given industry the debt incurred for its establishment can properly be taken from the aggregate of municipal obligations in determining the borrowing power of a city.

Self-Supporting Activities

Under this application of the principle of self-support, the scope of municipal activity in connection with public service enterprises is limited only by the ability of the administrative officers to conduct such industries on a business basis, and without laying too heavy burdens on the public. Unless municipal officers can satisfactorily demonstrate their ability to do this, debts incurred on account of municipal industries should be treated in the same manner as other obligations. If this plan is followed, a city's power to borrow for productive enterprises will be limited only by its ability to conduct these enterprises on sound business principles.

Sinking Fund Bonds

It is provided by law that in figuring the borrowing capacity of a city, bonds held in sinking funds shall be deducted from the gross bonded indebtedness. Under these conditions it would seem that the municipal accountant is justified in regarding cash designated for the purchase of sinking fund bonds as in the same class with the bonds themselves.

Bonds issued by a municipal enterprise designated as self-sustaining though held in a sinking fund cannot be reckoned as an offset to obligations issued by a city enterprise not so designated. In other words, bonds which are exempted must be omitted from both sides of the account when calculating the debt limit of a city.

Special Revenue Bonds

Special revenue bonds are issued to provide for items omitted from the annual budget. The redemption of these bonds is generally provided for in the budget of the year next succeeding the one of the issue. The usual practice when computing the city debt is to include all special revenue bonds.

Revenue Bonds

Revenue bonds are frequently issued in anticipation of taxes to be collected. It has been held that revenue bonds issued against taxes in arrears are to be included as a part of the indebtedness of a city when figuring the borrowing capacity; but revenue bonds issued in anticipation of taxes, to be paid the same year as the taxes are collected, are not.

Sundry Liabilities

It has generally been held that the difference between the total amount of outstanding contracts and the cash payments on them is a part of a city's debt, but the amount of open market orders issued for goods is not usually included, as the accounting system does not always provide for showing this contingent liability.

Diversion of Funds

Cases are on record where the general fund has been drawn on to liquidate debts which should have been met from special funds. In this case the liabilities liquidated are still properly a part of the debt, and must be so considered. Proper systems should be introduced to safeguard disbursements and prevent such diversion of funds.

Perpetual Care Funds

Cemetery perpetual care funds constitute a particular class of obligations frequently overlooked when figuring the

borrowing capacity of a city. Purchasers of lots create funds by depositing money with the city on which interest is paid annually to the cemetery for the care of such lots. For example, if it costs fifty cents per square foot to care for lots each year, a deposit of one thousand dollars at four per cent interest would take care of eighty square feet. It is obvious that even though the city spend perpetual care funds in meeting current expenses, the funds are still a continuing liability and must be reckoned as debts within the limit, just as if the funds were represented by outstanding securities.

Debt Limit—Massachusetts Cities

Reference to the published report of the special auditor of the City of Lawrence, Massachusetts, as shown below, indicates the method of figuring the borrowing capacity of the city in conformity with the requirements of the Commonwealth of Massachusetts. The debt limit in Massachusetts is fixed at two and one-half per cent of the average net valuation for the three years immediately preceding. The average valuation for the last three years is determined in accordance with the requirements of the Massachusetts law as shown in the following statement. This average, however, must in no case exceed the net valuation of the last year.

Date		
1908	$56,437,858.00	
1909	59,443,146.00	
1910	65,496,532.00	
	$181,377,536.00	
Average Valuation	60,459,178.67	
Debt Limit 2½% of same		$1,511,479.47

Debt Limit brought forward.....		$1,511,479.47
Bond Indebtedness Within the Limit.....	$1,541,700.00	
Cemetery Perpetual Care Fund	96,147.00	
	$1,637,847.00	
Less Municipal Loan Sinking Fund.....	133,201.43	1,504,645.57
Borrowing Capacity Within Debt Limit..		$6,833.90

The debts of self-sustaining municipal industries are excluded from the calculation of the debt limit in the foregoing statement, and to the bond indebtedness within the limit, the cemetery perpetual care fund is added. Finally, the municipal loan sinking fund is deducted, which reduces the debt within the limit and leaves a borrowing capacity of $6,833.90.

Debt Limit—City of New York

The following statement shows the method used in figuring the debt limit of the City of New York. This limit as allowed by law is 10% of the assessed valuation of taxable real estate. In order to arrive at the total existing funded debt, the county, water, rapid transit, and dock bonds are first set aside, as these are, in accordance with the state constitution, outside the debt limit.

Such liabilities as are incurred on account of land, contracts, and open market orders, are added to the net amount of the funded debt to obtain the net indebtedness within the debt limit. The debt-incurring power of the City of New

York at any given time is found by subtracting the net indebtedness from the debt limit.

STATEMENT OF THE DEBT LIMIT OF THE CITY OF NEW YORK AS OF JANUARY 2, 1914

Debt-incurring power within the debt limit of 10% of the assessed valuation of taxable real estate		$800,664,786
Gross funded debt	$1,224,876,631	
Debts outside debt limit—county bonds, certain water bonds, rapid transit bonds, and dock bonds	301,302,808	
Funded debt within debt limit	$923,570,823	
Sinking fund holdings for redemption of funded debt	320,776,899	
Net funded debt within the debt limit	$602,793,924	
Debts other than funded debt	146,497,112	
Net indebtedness within the debt limit		749,291,036
Present debt-incurring power, or borrowing capacity		$51,373,750

The sinking fund holdings which are available for the redemption of the non-exempt debt are computed as follows:

Total securities and cash in sinking funds...		$332,701,010
Less amount of accrued amortization on exempted bonds.....		20,766,966
Net sinking fund holdings for redemption of non-exempt debt.....		$311,934,044
Plus 1914 budget appropriations amortization of funded debt...	$7,451,778	
Plus budget appropriations for direct redemption of funded debt	1,391,077	8,842,855
Sinking fund holdings for redemption of funded debt.....		$320,776,899

Résumé

To sum up: Legislatures have put a curb on the propensity of cities to spend money by limiting their borrowing capacity to a certain percentage of the assessed valuation of property. The bonds of self-supporting enterprises which do not cause a burden on taxpayers are generally exempted in figuring this debt limit. Securities held in sinking funds for the purpose of amortizing bonds of non-self-sustaining enterprises are deducted from the outstanding debts, when arriving at the margin for borrowing. Included in the list of a city's debts, when arriving at the debt limit, are: special revenue bonds, revenue bonds against taxes in arrears, net contract liability, premium on bonds sold, and perpetual care funds. Excluded are, the interest on the liability for condemned land and the contingent liability on open market orders.

CHAPTER XXVI

UNIFORM SCHOOL ACCOUNTS

Value of Uniform Accounts

The subject of uniform school accounting is receiving much attention at the present time. To this end, schedules have been prepared to guide in the classification of accounts and as a basis for annual returns. In compiling statistics of cities and towns the Bureau of the Census will hereafter use these schedules in reporting school department receipts and disbursements. As soon as the standard classifications are generally adopted it will be possible to compare the published reports of various boards of education and draw conclusions as to the relative efficiency of administration.

In order to obtain the full benefit from uniformity in school accounts, it is necessary to find some expedient for incorporating the uniform schedules into a double-entry system of bookkeeping. Unless this can be done it is difficult to prepare a correct balance sheet and proper statistical reports.

School Property Accounts

Statistics should be kept in book form and should show the cost of all property used by the school system together with such additional information as is indicated by the following chart of property accounts suggested by the Committee on School Inquiry, City of New York.

Property Accounts

A—Sites

- Location
- School district
- School
- Date selected by Board of Education
- Date approved by Board of Education
- Date of vesting title
- Date of confirmation by Supreme Court
- Date of contract (if acquired by purchase)
- Amount
- Diagram of site
- Size of site
- Description
  - Block number
  - Lot number
- Cost
  - Land
  - Interest
  - Commissioners fees and expenses
- Total cost

B—Buildings

- Location
- Size
- Date erected
- Details of building
  - Number of stories
  - Material
  - Number of classrooms
  - Number of sittings
  - Number of 1,000 square feet building surface
  - Number of 1,000 square feet sidewalk and yard
  - Number of boilers
  - Number of furnaces

B—Buildings—*Continued*
- Details of building—*Continued*
  - Number of dynamos
  - Number of engines
  - Number of pumps
  - Number of fans
- Special features
  - Gymnasium
  - Lecture hall
  - Roof playground
  - Baths
  - Laboratories
  - Cooking room
  - Workshop
- Contract data
  - Dates of contracts
  - Nature of contracts
  - Contractors
  - Total Amounts

Account Number Classifications

The following chart shows a schedule of school accounts numbered according to the Dewey decimal system. It follows closely that adopted by the National Educational Association. A division is made between receipts from revenue sources and those on account of debt. A distinction is also made betwen the payments for expenses and general outlays, and those on account of debt service.

The figure in the first column of the chart indicates a main classification, the figure in the second a sub-classification, and this same figure is used in connection with decimals, to still further describe the item against which it appears, the number after the decimal showing the exact source of a receipt or the object of a payment.

Chart of Revenue Accounts

10 Receipts

11 Revenue receipts

- 11.1 Appropriations from city revenues
- 11.2 General property taxes
- 11.3 Special property taxes
- 11.4 Bank taxes
- 11.5 Liquor licenses and permits
- 11.6 Apportionments from State, teachers salaries
- 11.7 Apportionments from State, tuition
- 11.8 Apportionments from State, training class
- 11.9 Apportionments from State, academic quota and attendance
- 11.10 Books and apparatus
- 11.11 Tuition
- 11.12 Textbooks and supplies
- 11.13 Manual training and kindergarten supplies
- 11.14 Fines and penalties
- 11.15 Interest
- 11.16 Rents
- 11.17 Unclassified

12 Non-revenue receipts

- 12.1 Bond sales
  - Par value
  - Premium
  - Interest accrued
- 12.2 Notes
- 12.3 Transfer from sinking fund

13 Miscellaneous non-revenue receipts and balances

- 13.1 Sales of securities
- 13.2 Sales of property

13.3 Refunds
13.4 Transfers from special funds
13.5 Cash balance at beginning of year
13.6 Overdraft at end of year

20 EXPENDITURES

21 Revenue payments

Business Administration

21.1 Board of Education, expenses
21.2 School election and school census
21.3 Finance office and accountants' services
21.4 Legal service
21.5 General office expense
21.6 Superintendent of buildings

Educational Administration

21.7 Salaries of school superintendent and clerk
21.8 Attendance officer
21.9 Health officer
21.10 Unclassified

Instruction*

21.11 Salaries of principals
21.12 Salaries of supervisors
21.13 Salaries of teachers
21.14 Salaries of librarians
21.15 Free textbooks
21.16 Supplies used in instruction
21.17 Library books and apparatus
21.18 Unclassified

Operation of School Plant

21.19 Salaries of janitors

* The following symbols can be used to indicate the kind of school:
D—Day School
M—Manual Training School
K—Kindergarten School
N—Night School

	21.20	Cleaning
	21.21	Janitor's supplies
	21.22	Light
	21.23	Heating and ventilating
	21.24	Power
	21.25	Water
		Maintenance of School Plant
	21.26	Repairs and upkeep of grounds
	21.27	Repairs and upkeep of buildings
	21.28	Repairs and upkeep of equipment
	21.29	Insurance
		Miscellaneous Expenses
	21.30	Interest
	21.31	Pensions
22		Payments for outlays
	22.1	Land
	22.2	New buildings
	22.3	Equipment
23		Payments on account of debt service
	23.1	Redemption of bonds
	23.2	Redemption of notes
	23.3	Redemption of audited claims
	23.4	Sinking funds
24		Miscellaneous payments and balances
	24.1	Investment in securities
	24.2	Investment in property
	24.3	Refunds
	24.4	Overdraft at beginning of year
	24.5	Cash balance at end of year

Revenues

In some states the expense of operating the public school system is partly or wholly paid out of the income of invested funds known as the "Public School Fund"; what-

ever is required in addition is raised by local taxation. The public school fund is distributed to the several school districts, or other school administrations, on the basis of pupils' attendance. The revenue from certain licenses and permits also is appropriated for school purposes. Children residing outside of a free school district are frequently required to pay a fee for tuition, and this is sometimes a source of considerable revenue. In some cases boards of education have sinking, or other special funds, with real estate or securities as investments, and the interest receipts and rents from these special funds are recorded in the same accounts as other revenue receipts of the general fund.

All non-revenue receipts from special funds created for the purpose of erecting new school buildings and making important improvements must be kept separate from the general school revenues. The exact source of a non-revenue receipt should be indicated, whether it is from the sale of bonds or from notes negotiated in anticipation of a bond issue.

Receipts from the sale of securities or property are classified under the heading "Miscellaneous." Receipts from payments in error are known as refunds and are also reported under the miscellaneous classification. Lastly, the cash balances at the beginning of the year and the overdrafts at the end of the year are entered under the receipts heading.

Expenditures

The chart of account classifications provides for itemizing expenditures under numerous heads according to the objects for which they are made. The overhead charges for school administration are reported under account numbers 21.1 to 21.10, the first six of these numbers being used for expenses of a business nature, and the last four for those pertaining to education, as indicated.

The accounts for the cost of instruction should be classified not only according to object of payment, but also by the kind of school for which payment is made. For statistical purposes, technical, industrial, manual training, business, commercial and high schools are known as "Secondary Day Schools."

The largest item in a school budget is the salaries of the superintendents, principals, supervisors, and teachers. Whenever a supervisor is also a teacher, it is necessary to distribute his salary under the proper account classifications, according to the time spent. After salaries come the accounts for free text books, supplies used in instruction, library books and apparatus. Any payments not provided for in the various sub-classifications under instruction are itemized under the sub-heading "Unclassified."

All expenses incidental to the operation of the school plant are provided for under account numbers 21.19 to 21.25 as shown in the chart. So far as possible the cost of operation should be prorated according to kinds of schools, as in the case of payments for instruction.

Payments for repairs and upkeep which do not have anything to do with operation are next classified in accounts from 21.26 to 21.29, as shown in the chart. Naturally, the charges for renovating the school plant, such as painting, glazing, and repairs to plumbing, heating and ventilating equipment, are properly classified under the maintenance heading.

Any miscellaneous payments such as those for interest and pensions are reported after account numbers 21.30 and 21.31, respectively.

Payments for new buildings, grounds, equipment, or extensive additions are generally known in municipal terminology as "Outlays" per accounts 22.1 to 22.3, inclusive. Where a special fund is set aside to purchase land, buildings,

and equipment, the payments for outlays include all costs for acquiring title, grading, architects' fees, advertising for contracts, construction, and installation of heating, plumbing, and ventilating plant.

The fact that a board of education is generally a heavy borrower necessitates an account for reporting payments made on account of debt service. Payments for the redemption of bonds, notes, audited claims, and sinking fund obligations are reported in accounts 23.1 to 23.4, respectively.

Accumulated funds frequently have to be invested, and so the purchase of securities or property is reported in accounts 24.1 and 24.2. Repayments of erroneous receipts are known as refunds, as shown in account 24.3. Lastly, the overdraft at the beginning of the year or the cash balance at the end of the year is entered, to make the report complete.

Combined Cash Book and Journal (Form 82)

A board of education generally deposits all revenue receipts in a general fund account at the bank. From this account all revenue payments are made for administration, instruction, operating, and maintenance of the school plant. Miscellaneous expenses are also paid from the general fund. General fund cash coming in is a credit to revenue, and the payments from it a charge to appropriation, or to some general ledger account. Separate bank accounts are generally operated for all sinking and special funds. The simplest form for keeping a record of the cash transactions of a board of education is found in the combined cash book and journal shown in Form 82. The columnar form makes it possible to keep the various bank accounts separate, which is desirable.

Pay-Rolls (Forms 83a, b)

As soon as the contracts with teachers for the year have been signed the pay-roll master sheet (Form 83a) can be

written up. The names are best arranged according to schools, a few lines being left vacant after each school. The master sheets serve with but little change for the entire school year. Every month short sheets (Form 83b) are inserted in the pay-roll binder so as to work with the master sheets, the attendance record being kept on these. When the short sheet records are complete, they are removed and filed in a transfer binder

Voucher Checks (Form 31)

In municipal operations, voucher checks should be used for all payments. The voucher check derives its name from the fact that the endorsement on the check serves automatically by its terms as a receipt for the payment made by the check, so that it is not necessary to send the vendors' invoices out to be receipted. A simple voucher check is shown in Form 31. On the left hand of the check provision is made for listing the dates of invoices and amounts paid. The voucher checks are numbered from one up, and padded in blocks ready for use.

Petty Cash Voucher (Form 84)

The commercial practice of establishing a small fund of, say $100, out of which petty cash disbursements are made, should be followed by boards of education. Receipts for all payments from this fund are obtained on the petty cash voucher, shown in Form 84. When it becomes necessary to reimburse the petty cash fund, a voucher check is drawn for the necessary amount, and make payable to petty cash. The petty cash vouchers are stamped "Date Paid" and the check entered in the combined cash book and journal, distribution being made against the proper account number classifications.

Journal Entries

All such items of revenue as have accrued but have not

been collected must be journalized, also such charges against appropriations as are due but not paid. For this purpose three-column journal sheets are commonly used.

As soon as the appropriation has been made and properly recorded in the minute book of the board of education the following journal entry should be made:

Date	Item	Detail	Charges	Credits
	Revenue, 1914		0.00	
		0.00		
		0.00		
		0.00		
		0.00		
	Appropriation, 1914			0.00
		0.00		
		0.00		
		0.00		

These journal entries open the following accounts on the general ledger:

Revenue, 1914

Budget	J	0.00			

Appropriation, 1914

			Budget	J	0.00

and also open accounts in the subsidiary revenue and appropriation ledgers as follows:

(1) Revenue Accounts

Special Property Taxes—Account No. 11.2

Date	Item	Fol.	Cash Received	Journal		Revenue Balance
				Charges	Credits	

(2) Appropriation Accounts

Salaries, Teachers—Account No. 21.13

Date	Item	Fol.	Cash Paid	Journal		Appropriation Balance
				Charges	Credits	

Where a school district has its own taxes a journal entry should be made for them as soon as the levy has been voted upon, as follows:

Date	Item	Detail	Charges	Credits
	Taxes Receivable		0.00	
	Revenue 191..			0.00

which opens the following account on the general ledger:

Taxes Receivable, 1914

Revenue	J	0.00			

Ledger Accounts

Other accounts which usually appear on the general ledger of a board of education are shown in the following trial balance:

TRIAL BALANCE

Cash		Interest Payable	
General Fund		Acounts Payable	
Sinking Fund			
Building Fund			
Petty Cash			
Taxes Receivable		Bonds, School No. 1	
Year of 1911		Bonds, School No. 2	
Year of 1910		Bonds, School No. 3	
Year of 1909			
Year of 1908			
Interest Receivable			
Insurance Unexpired			
Inventory			
Real Estate			
Less Depreciation Reserve			
Sinking Fund Securities		Sinking Fund Account	
Constructions Authorized		Building Fund Account	
Prize Funds		Prize Fund Account	
Total		Total	

Financial Statements

Obviously a board of education does not have losses and gains in the sense which a commercial enterprise does, and

the ordinary financial statement cannot be used. However, a board has an appropriation which it should not exceed, and revenues which must be collected if its expenses are to be met. Therefore statements are necessary; and those which are of most value to a board of education are:

(1) Statement of Collection and Revenue Balances

Acct. No.	Collections				Journal		Revenue Balances
	Item	Month	Previous	Total	Charges	Credits	

(2) Statement of Payments and Appropriation Balances

Acct. No.	Payments				Journal		Appropriation Balance
	Item	Month	Previous	Total	Charges	Credits	

With these statements the members of the board can see at a glance if the collector is behind-hand in his duties and if expenditures are within the limits of the appropriations. When these statements accompany a balance sheet prepared from the trial balance, a complete set of financial statements is before the board of education for its consideration. Financial statements modeled on the uniform lines explained for reporting school accounts should be incorporated into the published reports of every board of education.

Statistical Records

Cards are well adapted for keeping statistical records of pupils. One card carries the complete history of the pupil from entrance to graduation. While the pupil is in school it is filed alphabetically, by classes, or with tabs to indicate classes, in which case cards for the whole school may be filed in one alphabetical sequence. If a pupil leaves school temporarily or is transferred, his card gives the complete history of the case. When he leaves school or graduates, his card is taken from the active list and filed alphabetically in the list of those who have left school or are in the alumni list, as the case may be. Further alumni information may be added from time to time on the back of alumni cards.

CHAPTER XXVII

MACHINE TABULATED RECORDS

Machine-Punched Card (Form 85)

The use of records designed for tabulation by machinery has been found advantageous in many private enterprises, and such records should be even more beneficial in municipal undertakings. Machine tabulated records have already been adopted in several municipalities because of their great convenience in the analysis and distribution of expenditures, and the use of such devices is likely to be extended.

Machine-punched cards are substituted for handwritten records when tabulations are to be performed by automatic machinery. The cards used resemble those made for Jacquard looms or automatic player pianos. For municipal use these cards are provided with columns for the date, reference number, fund, function, classification, quantity, and amount, holes punched in the columns taking the place of the written record. Besides the date and reference columns, the card is divided into three sorting and two adding fields, so that the cards when punched can be sorted by funds, functions or classification, and both the quantity and amount columns can be added. Were the records written by hand it would be necessary to write the quantity and amount three times in order to distribute the information in three different ways, but where machine-punched cards are used, the distribution is obtained automatically by a simple sorting process.

Decimal Codes

The information which it is desired to tabulate must be

put in the form of a code, and for this the decimal system is the most elastic and convenient. Its use is illustrated in the following partial codes for a municipal sanatorium for tuberculosis.

FUND CODE

1000. Appropriations
1100. Municipal sanatorium for tuberculosis
1110. Personal service
1111. Salary, superintendent
1112. Salary, medical officer
Etc., etc.
1120. Supplies
1130. Equipment
Etc., etc.

The first place in front of the decimal point denotes a sub-classification; the second place, a main classification; the third place, the name of the institution or department, and the fourth place, the fund.

FUNCTIONAL CODE

3000. Municipal sanatorium for tuberculosis
3100. Administration
3110. Executive
3111. Superintendent
3120. Purchase and storage of supplies
3121. Purchasing agent
3122. Head storekeeper
3200. Hospital service
3210. Medical supervision
3211. General medical officer
3220. Male wards
3221. Resident physician
3222. Staff house

3223. Nurses' residence
3224. Wards
3225. Kitchen and dining hall
3226. Janitor and cleaning service
Etc., etc.

The first place in front of the decimal point in the functional code shows the detail of a function; the second place, the activity or sub-function; the third place, the function, and the fourth place, the institution.

Classification Code

400. Personal service
410. Salaries
411. Regular
412. Temporary
420. Wages
421. Regular
422. Temporary
500. Supplies
510. Agricultural supplies
511. Bulbs
512. Fertilizers
513. Seeds
520. Cleaning supplies
521. Soap
522. Washing powder
Etc., etc.

The first place in front of the decimal point in the classification code shows the detail of a sub-classification; the second place, the sub-classification, and the third place, a main classification. The use of the decimal system permits of adding new classifications at any time without upsetting the existing code.

Punching the Cards

A self-feeding punch provided with keys similar to the keys of a typewriter is used to perforate the cards. Suppose it is desired to make a record of the information contained on an invoice such as the following:

Date	March 27, 1912
Invoice No.	275
Fund	Appropriations, 1912—Supplies
Function	Cleaning male wards
Classification	Soap
Quantity	144 cakes
Amount	$5.00

Reference to the three foregoing codes shows that the symbol for the appropriation for supplies is 1120, the one for cleaning male wards is 3226, and the one for soap is 521. The information contained on the invoice can now be recorded very rapidly on the machine-punched card. The card with this information punched upon it is shown in Form 85, and can be read by one familiar with the codes as easily as if written out by hand.

Sorting Cards

The machine-punched cards are placed in trays as they are punched. When they are to be used, as in the preparation of an analysis of expenditures, the cards are removed and sorted by using an automatic card sorting machine, which forms part of the equipment. In this machine the cards are fed automatically at the rate of several hundred a minute, and are separated so that all cards which have the same perforations fall together. The cards, which are usually represented by the figures from 0 to 9, are segregated into ten compartments. There are two extra compartments for 11 and 12 when cards are sorted according to months.

Tabulating Cards

When the cards have been sorted, they are run through an automatic tabulating machine at the rate of more than a hundred a minute. The brushes of this machine are connected electrically with adding machines in such a manner that as the cards pass through the quantities and amounts recorded in the last two fields are automatically added. At the end of each run the totals of the fields added are transferred to a sheet by hand, and so on throughout the whole tabulation.

Use for Machine Tabulated Records

The amount of information which it is possible to obtain by the use of machine-punched cards largely depends upon the ingenuity of those in charge. By a proper arrangement of codes the possible combinations of facts are made almost limitless. Nearly any question regarding a city's expenditure can be answered from a carefully devised card system. For example, in the fire department, expenditures may be divided so as to show how much it costs to run each station house, or the cost of feeding the fire horses, or the outlay for salaries, or almost any other item.

CHAPTER XXVIII

ACCOUNTING FOR SMALL CITIES

Requirements

It is obvious that the detailed accounting methods set forth in the preceding chapters are not fully applicable to towns and to the smaller cities where accounting requirements are far less exacting, and where clerical forces are limited as to number. It will be found, however, that the forms and methods suitable for the larger cities can readily be adapted to the requirements of the smaller city. Each of these will have its own peculiarities which must be handled as they arise, but the system adopted should give adequate control over the financial transactions and the more important funds. One point always to be observed is the distinction between transactions which pertain to the operation of the various departments and those which pertain to construction. Accounts having to do with the former class of transactions are here designated as "current" accounts, while those in the latter class are called "capital" accounts.

In introducing an accounting system, the wishes of the chief accounting officer of the city must usually be followed as to the form and make-up of supporting schedules, statements of unexpended appropriations, bond funds, etc. The forms shown in the present volume can readily be adapted to any special requirements of this kind.

General Ledger Accounts

The accounts generally required on the books of a small city are shown in the following list. A study of local con-

ditions is always necessary to determine just what records and accounts are necessary to comply with the various ordinances.

GENERAL LEDGER ACCOUNTS

Current Accounts

Budget Requirements	Appropriations (Year)
Special Revenue Requirements	Special Appropriations
Current Cash	Reserve for Current Claims
Taxes Receivable (Year)	Current Vouchers Payable
Water Rates Receivable	Current Payrolls Payable
	Reserve for Abatement of Taxes
	Revenue Bonds
	Special Revenue Bonds
	Current Surplus

Capital Accounts

Construction Requirements	Construction Funds Authorized
Capital Cash	Reserve for Capital Claims
Sewer Assessments	Capital Vouchers Payable
Street Paving Assessments	School Bonds
Construction	Sewer Bonds
Local Improvements	Street Paving Notes
	Capital Surplus

Sinking Fund Accounts

Sinking Fund Cash	Sinking Fund Surplus

Trust Accounts

Police Pension Fund Cash	Police Pension Fund Surplus

Classification of Journal Entries

The journal entries of a small city will usually embrace the following classes of transactions:

(1) Transactions which are the result of budgetary provisions.

(2) Expenditures made from funds provided to meet expenses omitted from the annual budget.

(3) The construction of public buildings or works when the proceeds of a bond sale are used, the redemption of the bonds being accomplished by means of contributions made to the sinking fund.

(4) The construction of sewers when the proceeds of a bond sale are used, the property owners being assessed for part of the cost of construction and the funds so raised being used for the redemption of the bonds.

(5) The paving of streets when notes are issued for the purpose and are retired by an assessment on the property owners for the entire cost.

(6) The sale of taxes or assessments when bid in by individuals and later redeemed by the owner of the property.

Illustrative Journal Entries

(1) Journal entries for the record of transactions which are the result of budgetary provisions.

Entry No. 1

Budget Requirements	$2,274,000	
Appropriations, 1914		$2,274,000
Annual budget for 1914 estimated to pay the expense of conducting the public business, to be met by taxes and current revenues. (An account for each separate appropriation is to be opened in a subsidiary ledger.)		

Entry No. 2

Appropriations, 1914	1,010,000	
Reserve for Current Claims		1,010,000
Estimated value of obligation assumed to be paid from the current fund.		

Entry No. 3

Reserve for Current Claims	516,000	
Current Vouchers Payable		516,000

Amount of appropriation claims vouchered for payment.

Entry No. 4

Appropriations, 1914	264,000	
Current Pay-Rolls Payable		264,000

Amount of pay-rolls certified for payment.

Entry No. 5

Current Vouchers Payable	220,000	
Current Pay-Rolls Payable	264,000	
Current Cash		484,000

Amount of vouchers and pay-rolls liquidated.

Entry No. 6

Taxes Receivable, 1914	1,250,000	
Reserve for Abatement of Taxes		50,000
Budget Requirements		1,200,000

Amount of tax rolls given the collector of taxes.

Entry No. 7

Water Rates Receivable	235,000	
Budget Requirements		235,000

Amount of water rate accruals.

Entry No. 8

Current Cash	364,000	
Taxes Receivable, 1914		344,000
Water Rates Receivable		15,000
Budget Requirements		5,000

Collection of taxes, water rates, licenses, permits, and fines.

Entry No. 9

Current Cash	200,000	
Revenue Bonds		200,000

Money borrowed in anticipation of the collection of 1914 taxes.

Entry No. 10

Reserve for Abatement of Taxes	10,000	
Taxes Receivable, 1914		10,000

Abatement of taxes.

(2) Journal entries for the record of funds provided to meet expenses omitted from the budget.

Entry No. 11

Special Revenue Requirements	$300,000	
Special Appropriations		$300,000

Allowances made for expenditures not provided in the budget. Details posted to subsidiary ledger.

Entry No. 12

Special Appropriations	115,000	
Reserve for Current Claims		115,000

Estimated amount of claims to be paid from special appropriations.

Entry No. 13

Reserve for Current Claims	67,000	
Current Vouchers Payable		67,000

Amounts of special claims vouchered for payment.

Entry No. 14

Special Appropriations	140,000	
Current Pay-Rolls Payable		140,000

Special pay-rolls certified for payment.

Entry No. 15

Current Cash	290,000	
Special Revenue Bonds		290,000

Cash received from sale of Special Revenue Bonds, which are to be included in tax levy of 1914.

Entry No. 16

Current Vouchers Payable	35,000	
Current Pay-Rolls Payable	140,000	
Current Cash		175,000

Current vouchers and pay-rolls settled.

Entry No. 17

Current Cash	270,000	
Special Revenue Requirements		270,000

Receipts not anticipated when preparing budget estimate.

(3) Journal entries required when the proceeds of a bond sale are used to construct a public school building, the redemption of the bonds being accomplished by means of contributions made to the sinking fund.

Entry No. 18

Capital Cash	$101,000	
School Bonds		$100,000
Capital Surplus—Premiums and Bonds		1,000

Proceeds from bonds sold for the construction of School No. 1.

Entry No. 19

Construction Requirements	101,000	
Construction Funds Authorized		101,000

Amount available for the construction of School No. 1.

Entry No. 20

Construction Funds Authorized	50,000	
Reserve for Capital Claims		50,000

Contract let for the construction of School No. 1.

Entry No. 21

Construction	50,000	
Construction Requirements		50,000

Acceptance of part of School No. 1.

Entry No. 22

Reserve for Capital Claims	42,500	
Capital Vouchers Payable		42,500

Certificates presented by contractor for 85% of contract price of work completed. Balance payable one year after completion of work.

Entry No. 23

Capital Vouchers Payable	42,500	
Capital Cash		42,500

Payment of contractor's certificates.

Entry No. 24

Appropriations, 1914	10,000	
Current Cash		10,000

Cash contributed to the sinking fund.

Entry No. 25

Sinking Fund Cash	10,000	
Sinking Fund Surplus		10,000

Cash deposited to the credit of the sinking fund.

Entry No. 26

Sinking Fund Surplus	10,000	
Sinking Fund Cash		10,000

School bonds redeemed by the sinking fund.

Entry No. 27

School Bonds	10,000	
Capital Surplus		10,000

Redemption of school bonds by the sinking fund.

(4) Journal entries required when bonds are issued for the construction of sewers, the property owners being assessed for part of the cost of construction, and these assessments being used for the purpose of redeeming the bonds.

Entry No. 28

Capital Cash	$51,000	
Sewer Bonds		$50,000
Capital Surplus		1,000

Proceeds from the sale of sewer bonds.

Entry No. 29

Construction Requirements	51,000	
Construction Funds Authorized		51,000

Amount available for the construction of sewers.

Entry No. 30

Construction Funds Authorized	50,000	
Reserve for Capital Claims		50,000

Contract let for the construction of sewers.

Entry No. 31

Local Improvements	50,000	
Construction Requirements		50,000

Acceptance of sewer.

Entry No. 32

Reserve for Capital Claims	42,500	
Capital Vouchers Payable		42,500

Certificates presented by contractor for 85% of contract price of work completed. Balance payable one year after completion of work.

Entry No. 33

Capital Vouchers Payable	42,500	
Capital Cash		42,500

Payment of contractor's certificates.

Entry No. 34

Sewer Assessments	25,000	
Capital Surplus		25,000

Assessment on property owners for their share of the cost of sewer construction.

Entry No. 35

Capital Cash	20,000	
Sewer Assessments		20,000

Sewer assessments collected.

Entry No. 36

Sewer Bonds	10,000	
Capital Cash		10,000

Redemption of sewer bonds.

Entry No. 37

Appropriations, 1914	10,000	
Current Cash		10,000

Amount provided in the budget for redemption of sewer bonds.

Entry No. 38

Sewer Bonds	10,000	
Capital Surplus		10,000

Sewer bonds redeemed through budget provisions.

(5) Journal entries required when notes are issued for street paving, and these notes are paid by an assessment on the property owners who bear the entire cost of the paving.

Entry No. 39

Construction Requirements	$25,000	
Construction Funds Authorized		$25,000

Funds authorized for street paving.

Entry No. 40

Construction Funds Authorized	25,000	
Reserve for Capital Claims		25,000

Contract let for the paving of streets.

Entry No. 41

Local Improvements	25,000	
Construction Requirements		25,000

Acceptance of street paving.

Entry No. 42

Reserve for Capital Claims	21,250	
Capital Vouchers Payable		21,250

Certificates presented by contractor for 85% of contract price.

Entry No. 43

Capital Vouchers Payable	21,250	
Street Paving Notes		21,250

Notes given contractors.

Entry No. 44

Street Paving Assessments	25,000	
Capital Surplus		25,000

Assessments levied on property owners.

Entry No. 45

Capital Cash	16,000	
Street Paving Assessments		15,000
Capital Surplus		1,000

Collection of street paving assessments.

Entry No. 46

Street Paving Notes	15,000	
Capital Cash		15,000

Street paving notes redeemed.

(6a) Journal entries required when funds are provided to finance the sale of taxes.

Entry No. 47

Taxes Receivable, 1914	$1,000	
Appropriations, 1914		$1,000

Amount of tax levy required to finance tax sale.

Entry No. 48

Current Cash	1,000	
Taxes Receivable, 1914		1,000

Taxes collected by sale.

Entry No. 49

Appropriations, 1914	1,000	
Current Cash		1,000

Payments made for advertising the tax sale.

(6b) Journal entries required where taxes are bid in and paid for by individuals, and are redeemed later by the owner of the property.

Entry No. 50

Current Cash	$40,000	
Taxes Receivable, 1914		$39,000
Current Surplus		1,000

Sale of taxes due together with the expense incurred.

Entry No. 51

Current Cash	41,000	
Special and Trust Funds		41,000

Amount paid by owner of property to cover taxes and interest penalties.

Entry No. 52

Special and Trust Funds	41,000	
Current Cash		41,000

Payment made to person bidding in the taxes after property has been redeemed by original owner.

(7) Journal entries illustrating the method of handling a pension fund.

Entry No. 53

Police Pension Fund Cash	$1,000	
Police Pension Fund Surplus		$1,000

Amount given to the custodian of the pension fund.

Entry No. 54

Police Pension Fund Surplus	200	
Police Pension Fund Cash		200

Death benefit paid.

(8) Journal entries required at the end of an accounting period to close the accounts.

Entry No. 55

Current Surplus	$834,000	
Budget Requirements		$834,000
Appropriations, 1914	980,000	
Current Surplus		980,000
Current Surplus	30,000	
Special Revenue Requirements		30,000
Special Appropriations	45,000	
Current Surplus		45,000
Capital Surplus	52,000	
Construction Requirements		52,000
Construction Funds Authorized	52,000	
Capital Surplus		52,000

Entries made to close above accounts.

Ledger, 1914, Current Accounts*

Budget Requirements

1 Appropriations, 1914	$2,274,000	6 Taxes Receivable	$1,200,000
		7 Water Rates Receivable	235,000
		8 Current Cash	5,000
		55 Current Surplus	834,000
	$2,274,000		$2,274,000

Appropriations, 1914

2 Reserve for Current Claims	$1,010,000	1 Budget Requirements	$2,274,000
4 Current Pay-Rolls Payable	264,000	47 Taxes Receivable, 1914	1,000
24 Current Cash	10,000		
37 Current Cash	10,000		
49 Current Cash	1,000		
55 Current Surplus	980,000		
	$2,275,000		$2,275,000

Reserve for Current Claims

3 Current Vouchers Payable	$516,000	2 Appropriations, 1914	$1,010,000
13 Current Vouchers Payable	67,000	12 Special Appropriations	115,000
Balance	542,000		
	$1,125,000		$1,125,000

* Numbers before items in Ledger 1914 Current Accounts indicates the journal entries on the preceding pages from which such items were posted.

Current Vouchers Payable

5 Current Cash	$220,000	3 Reserve for Current Claims	$516,000
16 Current Cash	35,000	13 Reserve for Current Claims	67,000
Balance	328,000		
	$583,000		$583,000

Current Pay-Rolls Payable

5 Current Cash	$264,000	4 Appropriations, 1914	$264,000
16 Current Cash	140,000	14 Special Appropriations	140,000
	$404,000		$404,000

Current Cash

8 Taxes Receivable, 1914	$344,000	5 Current Vouchers Payable	$220,000
8 Water Rates Receivable	15,000	5 Current Pay-Rolls Payable	264,000
8 Budget Requirements	5,000	16 Current Vouchers Payable	35,000
9 Revenue Bonds	200,000	16 Current Pay-Rolls Payable	140,000
15 Special Revenue Bonds	290,000	24 Appropriations, 1914	10,000
17 Special Revenue Requirements	270,000	37 Appropriations, 1914	10,000
48 Taxes Receivable, 1914	1,000	49 Appropriations, 1914	1,000
50 Taxes Receivable, 1914	39,000	52 Special and Trust Funds	41,000
50 Current Surplus	1,000	Balance	485,000
51 Special and Trust Funds	41,000		
	$1,206,000		$1,206,000

Taxes Receivable, 1914

6 Sundries	$1,250,000	8 Current Cash	$344,000
47 Appropriations, 1914	1,000	10 Reserve for Abatement of Taxes	10,000
		48 Current Cash	1,000
		50 Current Cash	39,000
		Balance	857,000
	$1,251,000		$1,251,000

Reserve for Abatement of Taxes

10 Taxes Receivable, 1914	$10,000	6 Taxes Receivable, 1914	$50,000
Balance	40,000		
	$50,000		$50,000

Water Rates Receivable

7 Budget Requirements	$235,000	8 Current Cash	$15,000
		Balance	220,000
	$235,000		$235,000

Revenue Bonds

		9 Current Cash	$200,000

Special Revenue Requirements

11 Special Appropriations	$300,000	17 Current Cash	$270,000
		55 Current Surplus	30,000
	$300,000		$300,000

Special Appropriations

12 Reserve for Current Claims	$115,000	11 Special Revenue Requirements	$300,000
14 Current Pay-Rolls Payable	140,000		
55 Current Surplus	45,000		
	$300,000		$300,000

Special Revenue Bonds

		15 Current Cash	$290,000

Current Surplus

55 Budget Requirements	$834,000	50 Current Cash	$1,000
55 Special Revenue Requirements	30,000	55 Appropriations, 1914	980,000
Balance	162,000	55 Special Appropriations	45,000
	$1,026,000		$1,026,000

Ledger, 1914, Capital Accounts

Capital Cash

18 School Bonds	$100,000	23 Capital Vouchers Payable	$42,500
18 Premium on Bonds	1,000	33 Capital Vouchers Payable	42,500
28 Sewer Bonds	50,000	36 Sewer Bonds	10,000
28 Capital Surplus	1,000	46 Street Paving Notes	15,000
35 Sewer Assessments	20,000	Balance	78,000
45 Street Paving Assessments	15,000		
45 Capital Surplus	1,000		
	$188,000		$188,000

School Bonds

27 Capital Surplus	$10,000	18 Capital Cash	$100,000
Balance	90,000		
	$100,000		$100,000

Capital Surplus

55 Construction Requirements	$52,000	18 Capital Cash	$1,000
Balance	73,000	27 School Bonds	10,000
		28 Capital Cash	1,000
		34 Sewer Assessments	25,000
		38 Sewer Bonds	10,000
		44 Street Paving Assessments	25,000
		45 Capital Cash	1,000
		55 Construction Funds Authorized	52,000
	$125,000		$125,000

Construction Requirements

19 Construction Funds Authorized	$101,000	21 Construction	$50,000
29 Construction Funds Authorized	51,000	31 Local Improvements	50,000
39 Construction Funds Authorized	25,000	41 Local Improvements	25,000
		55 Capital Surplus	52,000
	$177,000		$177,000

Construction

21 Construction Requirements	$50,000		

Construction Funds Authorized

20 Reserve for Capital Claims	$50,000	19 Construction Requirements	$101,000
30 Reserve for Capital Claims	50,000	29 Construction Requirements	51,000
40 Reserve for Capital Claims	25,000	39 Construction Requirements	25,000
55 Capital Surplus	52,000		
	177,000		177,000

Reserve for Capital Claims

22 Capital Vouchers Payable	$42,500	20 Construction Funds Authorized	$50,000
32 Capital Vouchers Payable	42,500	30 Construction Funds Authorized	50,000
42 Capital Vouchers Payable	21,250	40 Construction Funds Authorized	25,000
Balance	18,750		
	$125,000		$125,000

Capital Vouchers Payable

23 Capital Cash	$42,500	22 Reserve for Capital Claims	$42,500
33 Capital Cash	42,500	32 Reserve for Capital Claims	42,500
43 Street Paving Notes	21,250	42 Reserve for Capital Claims	21,250
	$106,250		$106,250

Sinking Fund Cash

25 Sinking Fund Surplus	$10,000	26 Sinking Fund Surplus	$10,000

Sinking Fund Surplus

26 Sinking Fund Cash	$10,000	25 Sinking Fund Cash	$10,000

Sewer Bonds

36 Capital Cash	$10,000	28 Capital Cash	$50,000
38 Capital Surplus	10,000		
Balance	30,000		
	$50,000		$50,000

Local Improvements

31 Construction Requirements	$50,000	Balance	$75,000
41 Construction Rrequirements	25,000		
	$75,000		$75,000

Sewer Assessments

34 Capital Surplus	$25,000	35 Capital Cash	$20,000
		Balance	5,000
	$25,000		$25,000

Street Paving Notes

46 Capital Cash	$15,000	43 Capital Vouchers Payable	$21,250
Balance	6,250		
	$21,250		$21,250

Street Paving Assessments

44 Capital Surplus	$25,000	45 Capital Cash	$15,000
		Balance	10,000
	$25,000		$25,000

Special and Trust Funds

52 Current Cash	$41,000	51 Current Cash	$41,000

Police Pension Fund Cash

53 Police Pension Fund Surplus	$1,000	54 Police Pension Fund Surplus	$200
		Balance	800
	$1,000		$1,000

Police Pension Fund Surplus

54 Police Pension Fund Cash	$200	53 Police Pension Fund Cash	$1,000
Balance	800		
	$1,000		$1,000

Balance Sheet

Current Accounts

Current Cash		$485,000	Reserve for Current Claims	$542,000
Taxes Receivable	$857,000		Current Voucers Payable	328,000
Less Reserve for Abatement of Taxes	40,000	817,000	Revenue Bonds	200,000
			Special Revenue Bonds	290,000
Water Rates Receivable		220,000	Curent Surplus	162,000
		$1,522,000		$1,522,000

Capital Accounts

Capital Cash	$78,000	Reserve for Capital Claims	$18,750
Sewer Assessments	5,000	School Bonds	90,000
Street Paving Assessments	10,000	Sewer Bonds	30,000
Construction	50,000	Street Paving Notes	6,250
Local Improvements	75,000	Capital Surplus	73,000
	$218,000		$218,000

Trust Accounts

Police Pension Fund Cash	$800	Police Pension Fund Surplus	$800

CHAPTER XXIX

GRAPHIC CHARTS

Uses of Graphic Charts

Graphic charts are a sort of short-hand system for quickly presenting conclusions or results. Engineers have long been in the habit of preparing such charts for a concise and forceful presentation of the results of their investigations; but it is only recently that accountants have discovered that the graphic chart offers equal advantages for them. The use of charts can be extended to cover nearly every phase of municipal accounting and reporting.

The facts concerning the organization, finances, costs, and methods in several of a city's activities are graphically depicted in the charts of Exhibits A to M. Organization charts as shown in Exhibits A and B are frequently used and express better than can be done by any other method the relation of authorities and the division of responsibility. Charts similar to those for the health department can be made for any other city department as well, and the hospital chart can be used as a type to show the organization of any institution. A study of a cost system can readily be made as shown in Exhibit C in order to furnish a basis for remodelling an old system or for laying out a new cost system intelligently, while Exhibit D illustrates the exact use of the angle rule in connection with financial stationery.

Municipal Accounting System (Exhibit F)

The procedure for handling the accounts of a city may

be indicated by a chart showing the relation of one accounting record, or set of records, to another. This relation is expressed graphically by Exhibit F, which shows the various steps involved in entering transactions. The posting medium in all cases is an original document, such as an invoice, requisition, or bill, which has to be entered not only on a register in order to obtain a summary, but also upon a subsidiary ledger for the purpose of obtaining a detailed record. The next step is to journalize the footings of the register of documents in order to put all transactions into debit and credit form. Postings are then made from the journal to the general ledger as indicated by the chart. Whatever financial statements are required can then be made, either in summary form from the general ledger or in detail from the subsidiary ledger, or ledgers. Charts, similar to the one shown can be prepared to indicate the proper procedure for handling the routine in any department.

Accounting System Chart (Exhibit E)

The mechanism for handling municipal accounts is illustrated by Exhibit E. The method of journalizing will readily be understood by following the arrows. Solid lines indicate the debit entries and dotted ones, the credit entries. The sources of the various journal entries will be seen to be the different registers in which the many documents are entered. The documents which form the posting media are entered not only in the registers but also in the subsidiary ledgers as indicated. The fund accounts are shown on the left hand page of the accounting system chart and the proprietary accounts on the right.

Budget for 1914, City of New York (Exhibit G)

A comparative view of the several items in the 1914 budget for New York and the relative proportion of their constituent parts is shown by Exhibit G. By reference to

the chart shown in this exhibit the proportion which salaries and wages bear to the total allowance for any activity may readily be determined. In two of the budget appropriations there is no allowance for personal service, while the educational and recreational division is nearly all salaries and wages.

Amounts Paid for Personal Service, and Numbers of Employees (Exhibit H)

Graphic charts may be used to much advantage to show the relation which personal service bears to the number of employees. The method of preparing such a chart is illustrated in Exhibit H, which shows the relative amounts paid for personal service in the principal activities of the city of New York and also the relative numbers of employees in each. The amounts are shown in per cents on the inner circle and the number of employees in each department is similarly shown on the outer circle. The chart shows at a glance that the educational and recreational activity is the largest item. By following the chart in a clockwise direction the other activities are found arranged in the order of numerical importance.

Per Capita Cost of New York City Budget (Exhibit I)

An ingenious chart can be drawn to show the per capita cost of a city's budget for a series of years, together with the per cent above or below the average for the period covered by the exhibit. The per capita cost of the New York City budget is shown in Exhibit I, together with the per cents referred to. From $28.04 in 1906 the per capita cost has increased until in 1913 it reached $35.04, or about eight per cent above the average for the last seven years. Similar charts can be made to show the per capita cost of the various municipal activities.

Comparison of Net Funded Debt and Assessed Valuation (Exhibit J)

Historical data is readily compared by plotting it on cross section paper, using the horizontal lines for amounts and the vertical ones for the years. When the amounts in one series are several times as large as those in the other series, it is necessary to use two vertical scales in order to bring the curves close together for comparison. Reference to Exhibit J shows the net funded debt of New York City represented by a solid line, and the assessed valuation by a broken one. The scale on the left gives the amount of the net funded debt, and that on the right, the amount of the assessed valuation. The figures in the right hand scale are ten times as large as those in the net funded debt scale. It is apparent from the trend of the two curves that the rate of increase in the net funded debt is greater than that of the assessed valuation. Similar charts can be made to compare related facts such as the amount of the tax levy and the budget for a series of years.

Cost of Operating and Maintaining Bridges (Exhibit K)

The comparative cost of operating and maintaining two bridges is shown by Exhibit K. At first glance it is seen that it costs more to operate and maintain the draw bridge than the suspension bridge. The extra men employed, the cost of fuel, and the repairs to machinery explain this condition. Also it is seen that the annual cost of the draw bridge has a tendency to increase more rapidly than that of the suspension bridge. This fact is accounted for by the rise in the wages of mechanics employed on the draw bridge and the increased cost of having repairs made. Such a chart as that of Exhibit K can be used to illustrate the comparative cost of operating and maintaining municipal buildings and for other similar purposes.

Number of Nurses Required in Municipal Hospitals (Exhibit L)

A convenient means of providing a sliding scale to show the number of nurses required in municipal hospitals consists in a graphic chart in which the number of beds occupied are indicated on the vertical lines and the number of nurses required on the horizontal lines. Reference to Exhibit L shows that in a municipal hospital having 600 beds occupied, 120 nurses are required. The advantage of such a chart as the one illustrated lies in the ease with which the number of nurses required for any given number of beds can be found. Similar charts can be made for other purposes, as, for instance, to show the quantity of grain required for any given number of horses, etc.

Trend in Patient Days (Exhibit M)

It frequently happens that the trend in expenditures, population, or some other data is required in order to forecast approximately future events regarding a city. When such is the case the easiest method of arriving at the trend is to construct a graphic chart on cross section paper such as shown in Exhibit M. The solid line gives the yearly census of patients in Riverside Hospital for several years and the dotted line indicates the trend or general average. Numerous questions relating to the trend of events in a city can be answered more satisfactorily by a chart such as the one shown than in almost any other way.

CHAPTER XXX

CHARTS

HEALTH DEPARTMENT ORGANIZATION CHART

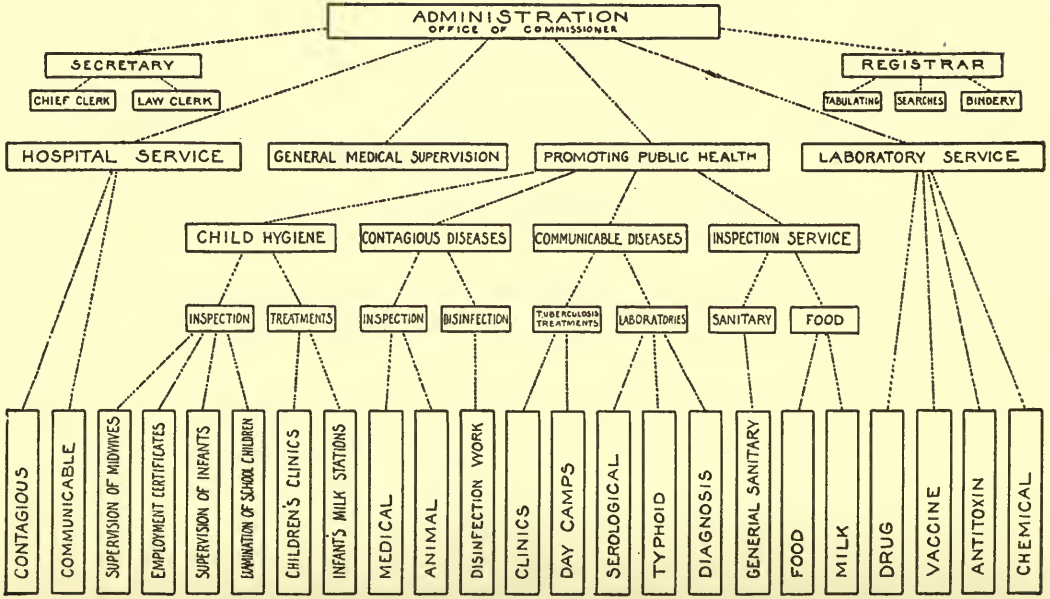


Exhibit A. Organization Chart of Health Department

CONTAGIOUS DISEASE HOSPITAL ORGANIZATION CHART

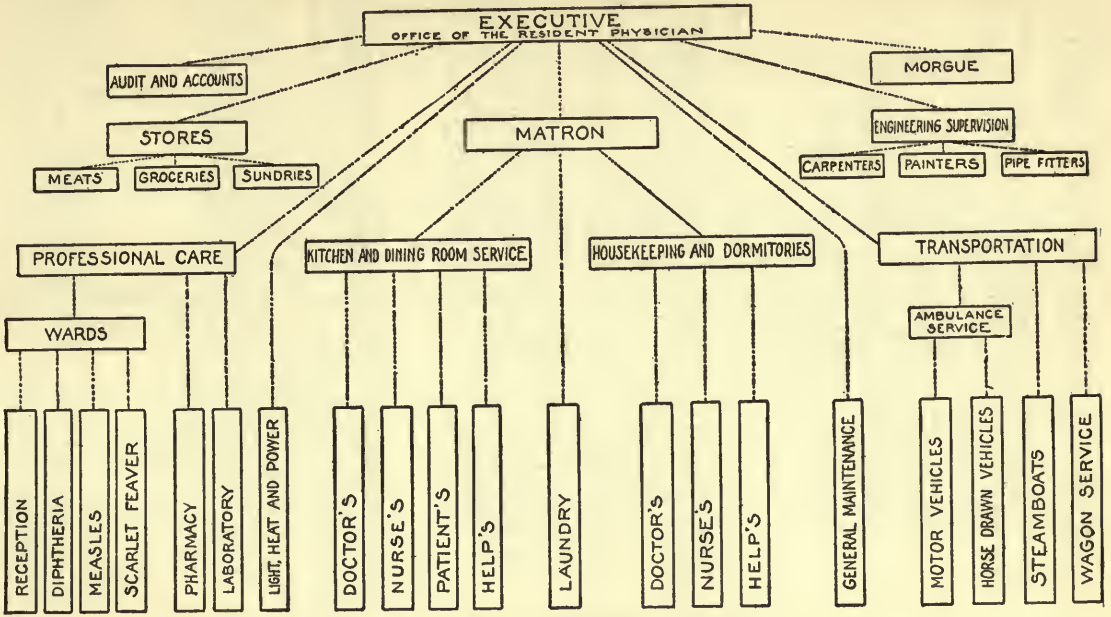


Exhibit B. Organization Chart of Contagious Disease Hospital

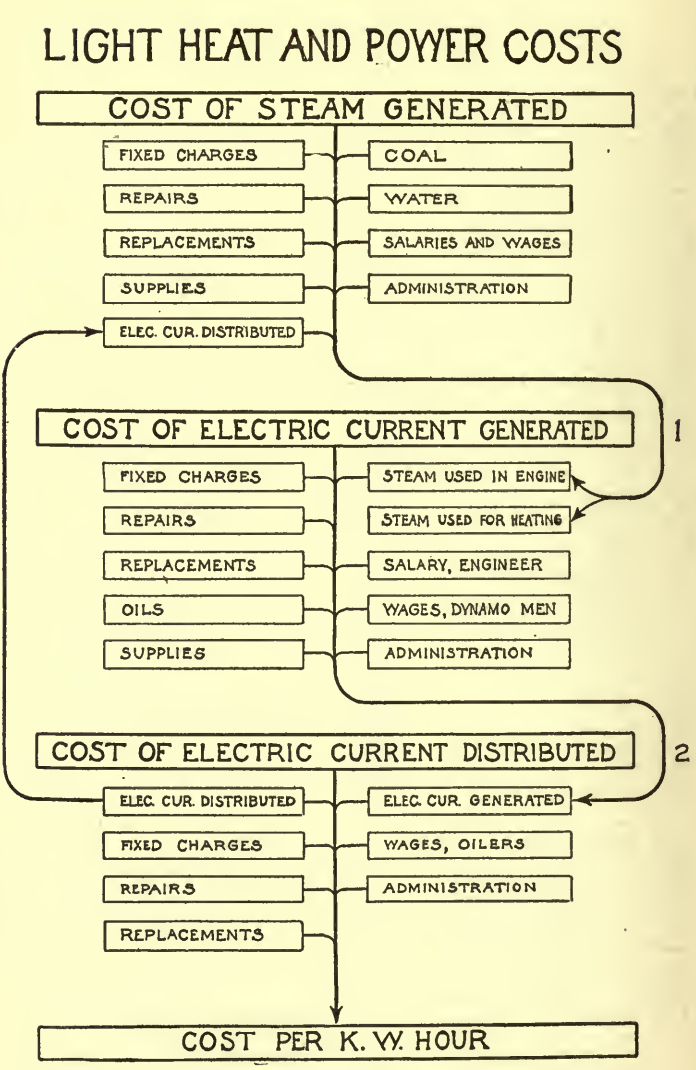


Exhibit C. Chart of Light, Heat and Power Costs

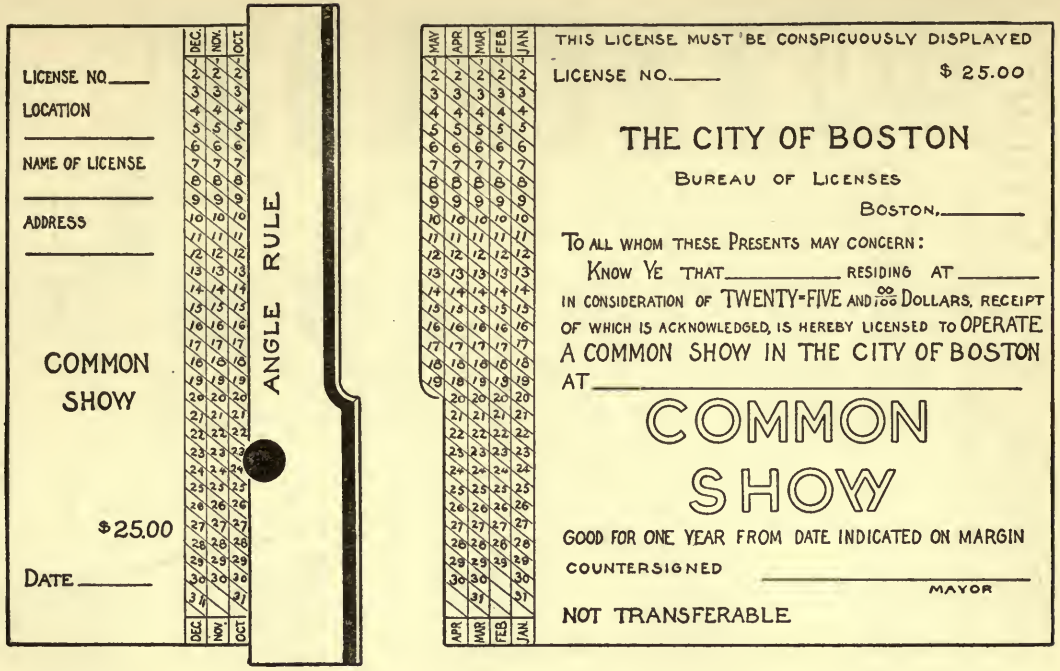


Exhibit D. Angle Rule Dating

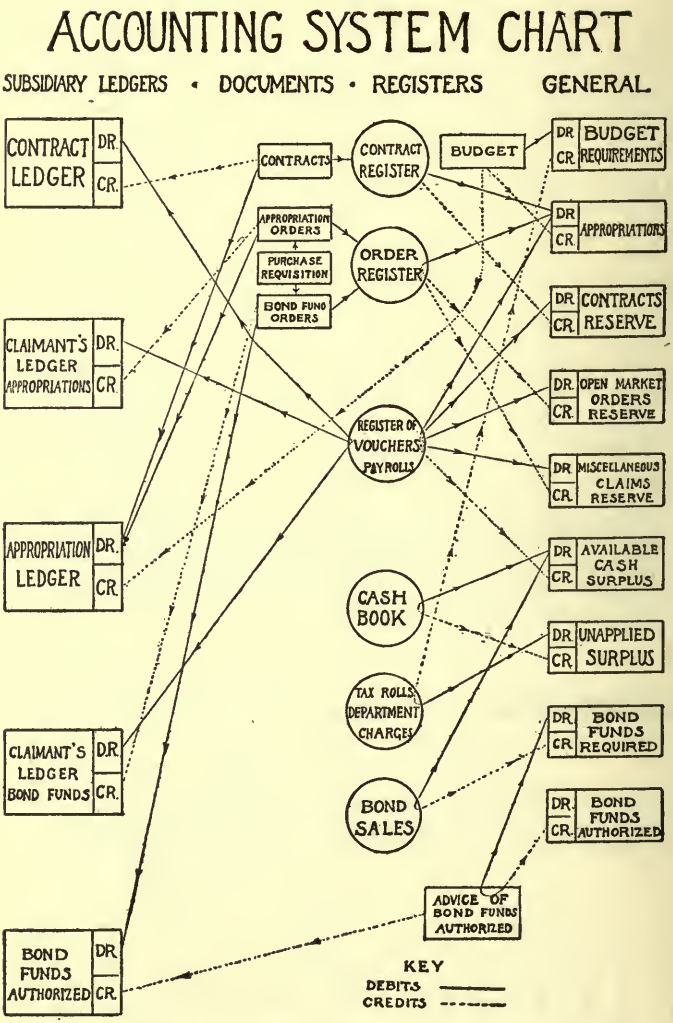


Exhibit E. Accounting System Chart—Left Half

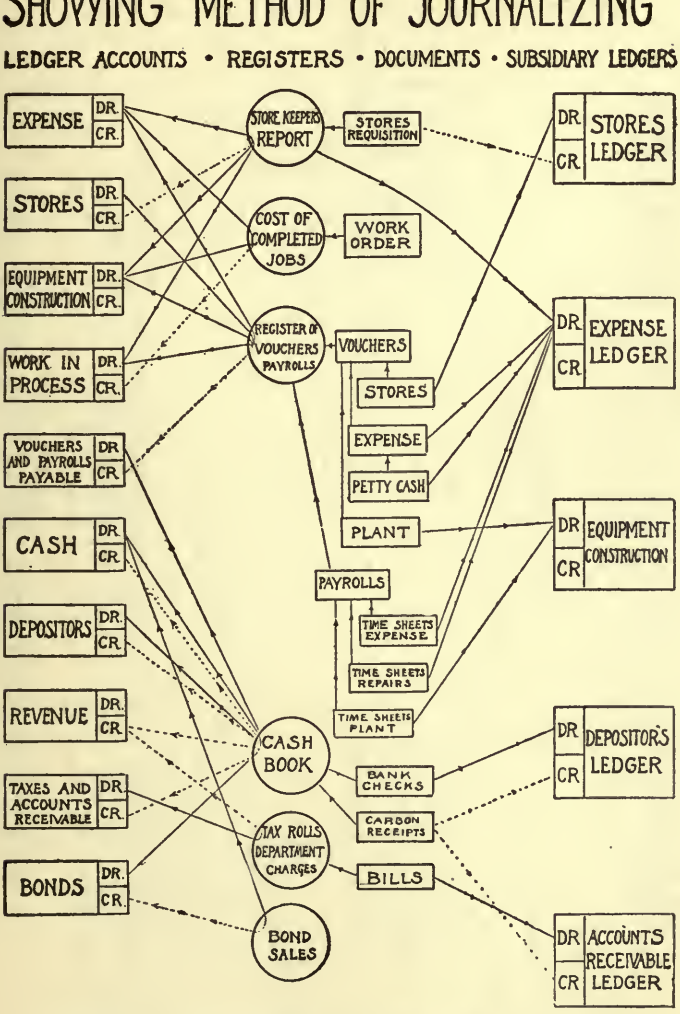


Exhibit E. Accounting System Chart—Right Half

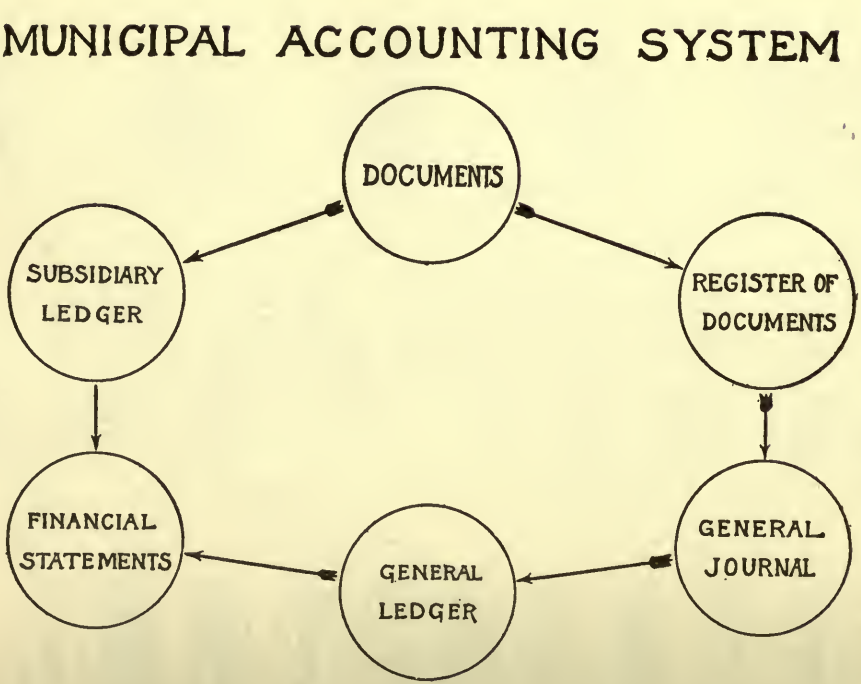


Exhibit F. Chart of Municipal Accounting System

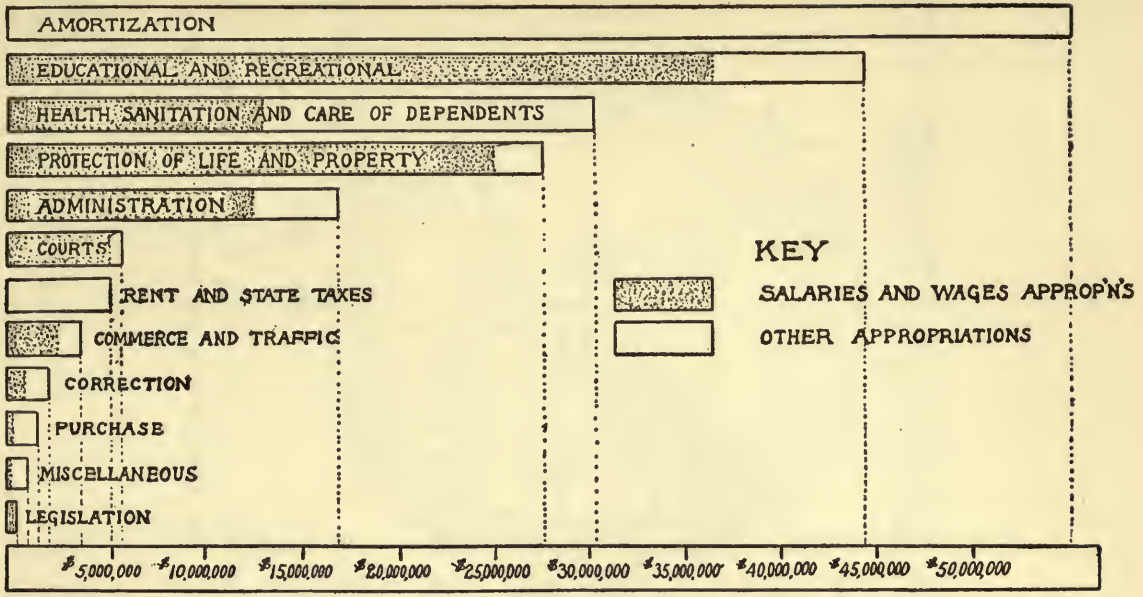


Exhibit G. Chart of Comparative Budget Allowances

RELATIVE AMOUNTS PAID FOR PERSONAL SERVICE AND NUMBERS OF EMPLOYEES

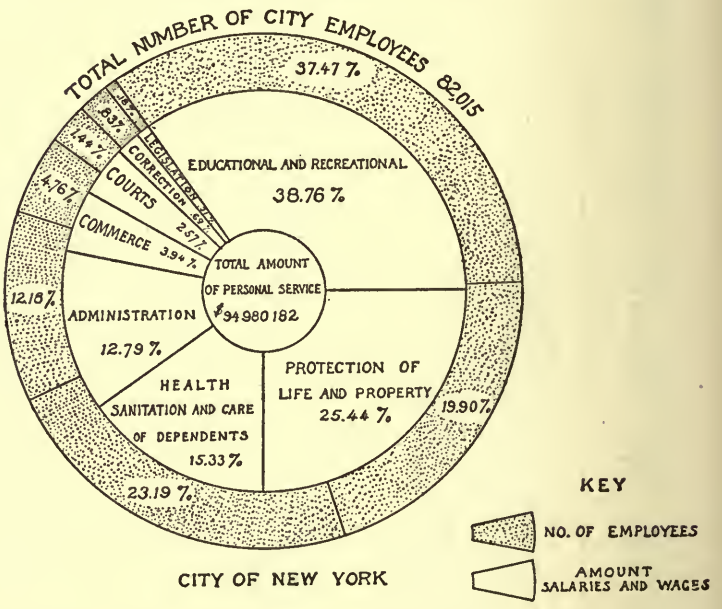


Exhibit H. Chart Showing Relative Amounts Paid for Personal Service and Numbers of Employees

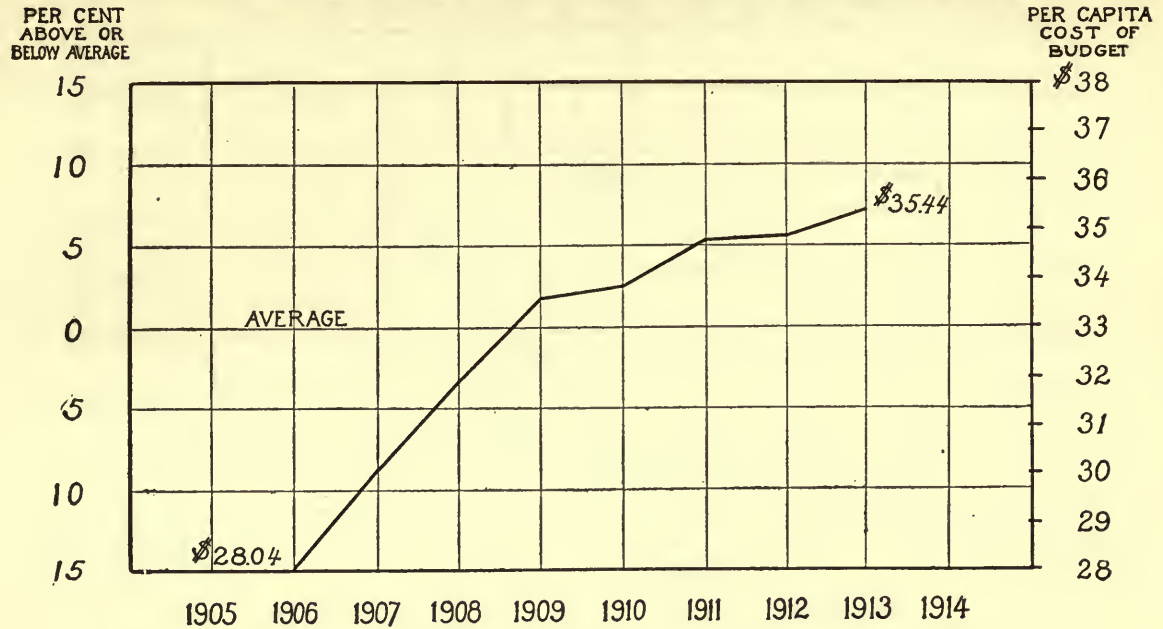


Exhibit I. Chart Showing Per Capita Cost of New York City's Budget

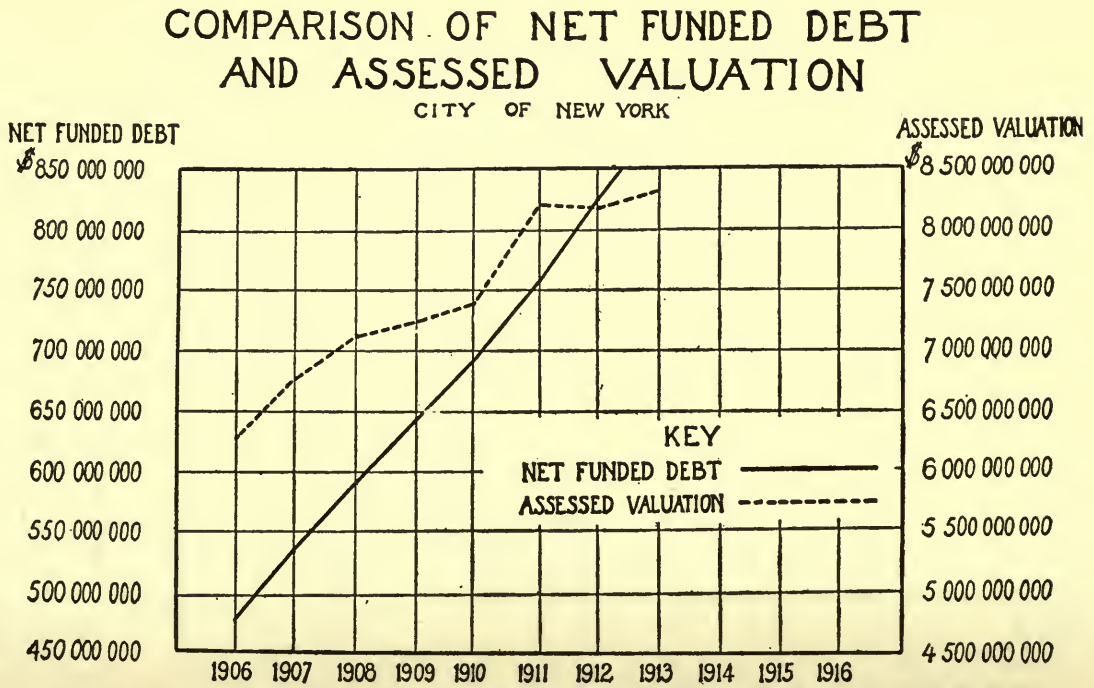


Exhibit J. Comparison of Net Funded Debt and Assessed Valuation

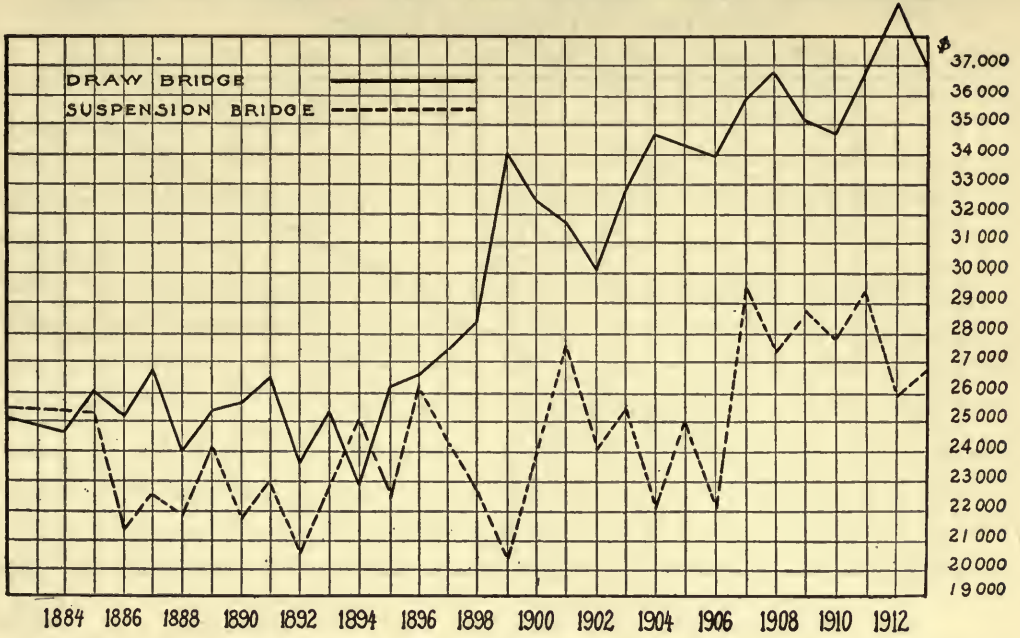


Exhibit K. Chart Showing Cost of Operating and Maintaining Bridges

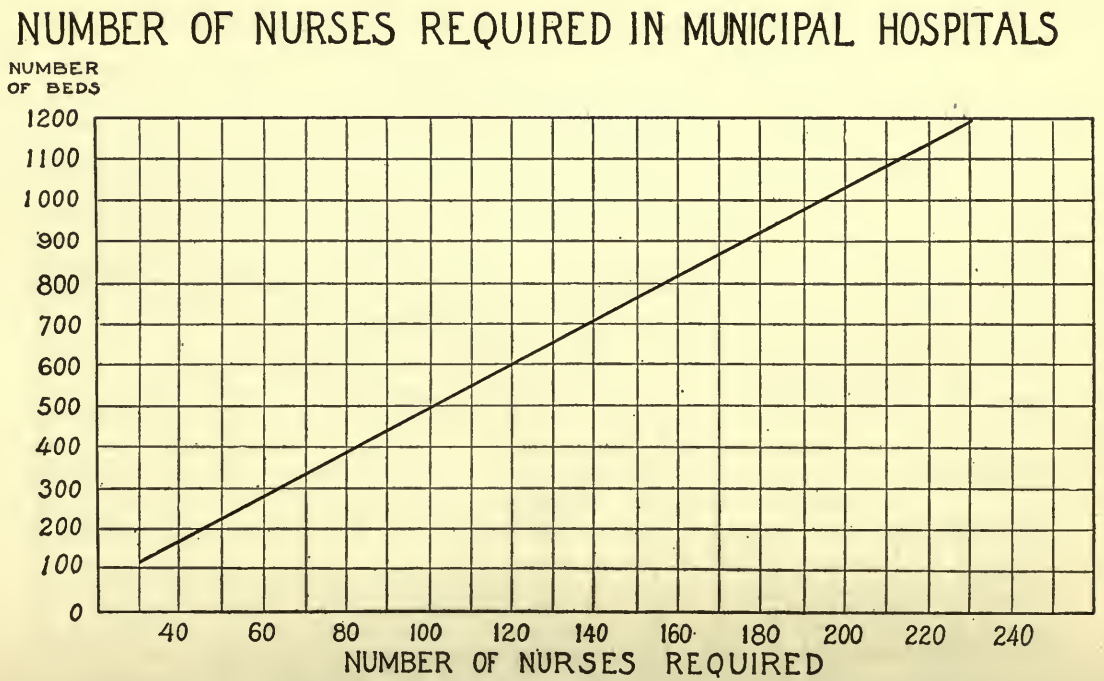


Exhibit L. Chart Showing Number of Nurses Required in Municipal Hospitals

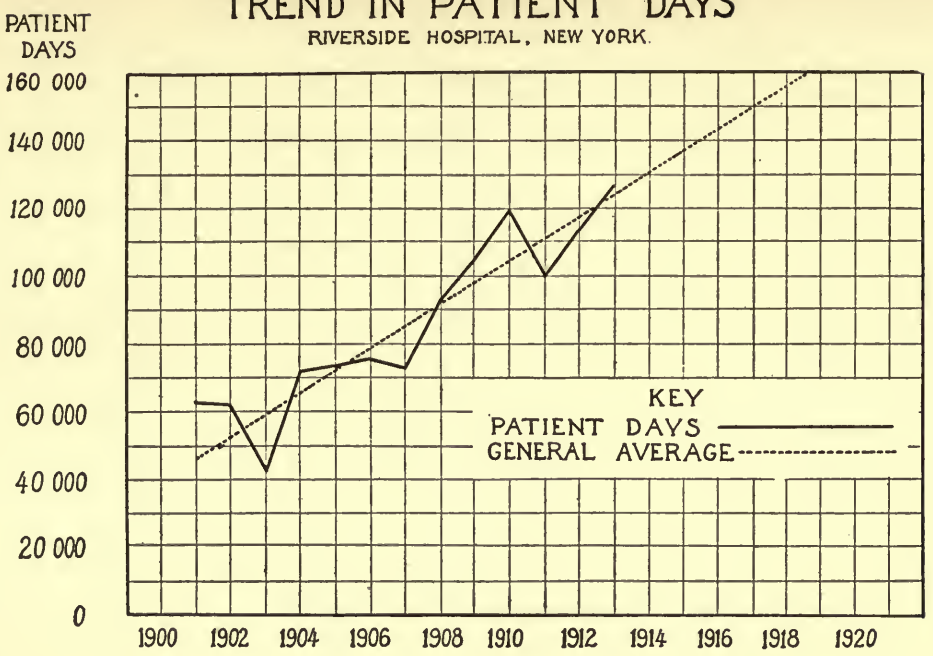


Exhibit M. Chart Showing Trend in Patient Days

CHAPTER XXXI

FORMS RELATING TO PURCHASES

VENDOR .....

ADDRESS .....

ORDER		REQUISITION	DELIVERED	ARTICLE	ESTIMATED			INVOICE					
												VOUCHERED	
NO.	DATE	NO.	AT		COST			DATE	AMOUNT			DATE	NO.

Form 1. *Vendor's Index Card*

ARTICLE .....

NUMBER		VENDOR	DELIVERED AT	ESTIMATED COST			QUANTITY	DESCRIPTION
ORDER	REQUISITION							

Form 2. Article Index Card

No._

REQUEST FOR PURCHASE

FUND_____ CHARGE ACCOUNT NO._____ 191_

TO THE GENERAL PURCHASING AGENT

SIR: YOU ARE REQUESTED TO PROCURE AND FORWARD TO

_____

THE UNDERMENTIONED ARTICLES WITH THE INVOICES THEREOF

QUANTITY	ARTICLES	ON HAND AND DUE	MONTHLY CONSUMPTION	FOR WHAT PURPOSE	QUANTITY OR WEIGHT	APPROX. VALUE	ORDER NO.

I HEREBY CERTIFY THAT THERE ARE SUFFICIENT FUNDS APPROPRIATED AND UNEXPENDED TO PAY THE ESTIMATED AMOUNT OF THIS REQUISITION.

_____

I HEREBY CERTIFY THAT THE ARTICLES ABOVE SPECIFIED ARE NECESSARY FOR USE OF THIS DEPARTMENT AND ARE TO BE USED SOLELY FOR THE BENIFIT OF THE CITY.

_____

Form 3. Request for Purchase

ORIGINAL ORDER TO BE ATTACHED TO THE VOUCHER TRANSMITTED TO COMPTROLLER

CITY OF NEW YORK DEPARTMENT OF PURCHASE

TO _____

PLEASE FURNISH AND DELIVER TO _____

_____

THE FOLLOWING ARTICLES ON THE CONDITIONS STATED ON OTHER SIDE

PUT P.O. NUMBER ON ALL PACKAGES AND INVOICES

DATE _____
P.O. NO. _____
REQ. NO _____
FUND _____
CHARGE ACCOUNT

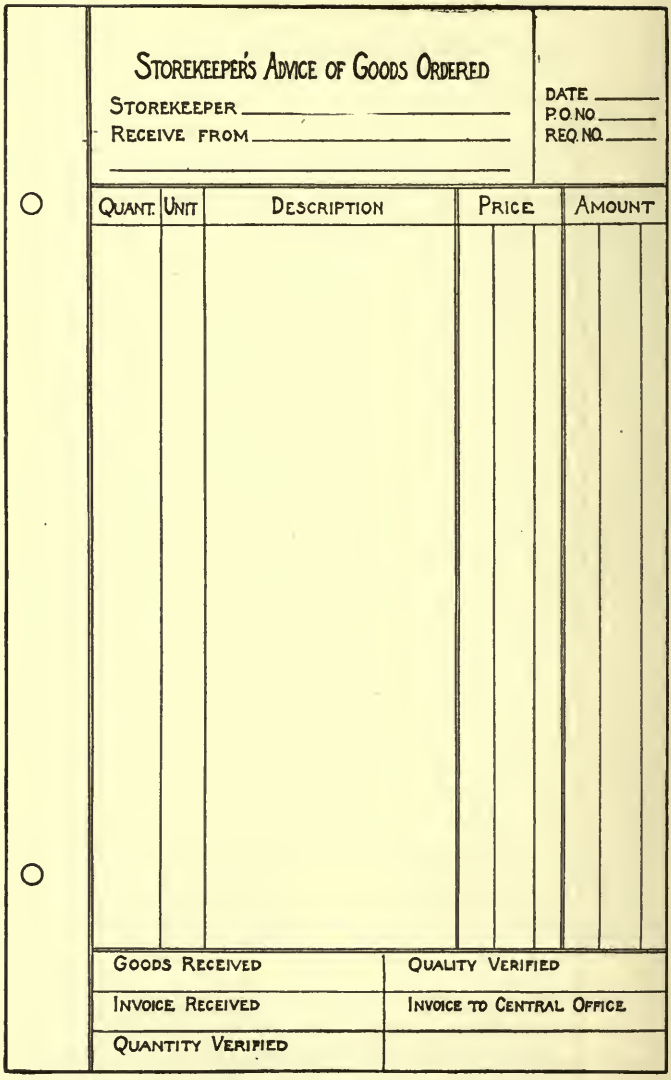
QUANT	UNIT	ARTICLES	PRICE			AMOUNT		

CERTIFICATES OF THE NECESSITY OF THE ABOVE SUPPLIES AND OF THE SUFFICIENCY OF THE APPROPRIATION THEREFOR WERE PLACED ON FILE IN THIS DEPARTMENT BEFORE THE EXPENDITURE WAS INCURRED

I HEREBY CERTIFY THAT THE ARTICLES ABOVE SPECIFIED HAVE BEEN RECEIVED AND THAT THE QUANTITY AND QUALITY THEREOF HAVE BEEN VERIFIED WITH THE EXCEPTIONS NOTED

THIS ORIGINAL ORDER MUST BE RETURNED BY VENDOR WITH THE GOODS
IT IS THEN TO BE SIGNED BY PERSON RECEIVING GOODS AND TRANSMITTED WITH INVOICE

Form 4. Vendor's Copy of Purchase Order



STOREKEEPER'S ADVICE OF GOODS ORDERED

STOREKEEPER _____

RECEIVE FROM _____

DATE _____
P.O. NO. _____
REQ. NO. _____

QUANT.	UNIT	DESCRIPTION	PRICE	AMOUNT

GOODS RECEIVED	QUALITY VERIFIED
INVOICE RECEIVED	INVOICE TO CENTRAL OFFICE
QUANTITY VERIFIED	

Form 5. Storekeeper's Advice of Goods Ordered

PURCHASE ORDER

OFFICE COPY

MESSRS. _____

_____

DATE _____
P.O. NO. _____
REQ. NO. _____

QUANT.	UNIT	DESCRIPTION	PRICE	AMOUNT

ORDER SENT
ADVICE SENT TO STOREKEEPER
GOODS RECEIVED AND INSPECTED
BILL RECEIVED
VOUCHER NUMBER

Form 6. Office Copy of Purchase Order

REGISTER OF CONTRACTS — MONTH OF..... 191...

DAY	NO.	NAME	ITEM	SYM	APPROPRIATIONS	SPECIAL REVENUE BOND FUNDS	CAPITAL FUNDS: CONSTRUCTION	CAPITAL FUNDS: REAL EST. PUR.	SPECIAL AND TRUST FUNDS	√

Form 7. Register of Contracts

REGISTER OF OPEN MARKET ORDERS Month of.....191...

Day	No.	Name	Item	Sym.	Appropriations	Special Revenue Bond Funds	Capital Funds	Special and Trust Funds	✓

REGISTER OF MISCELLANEOUS CLAIMS Month of..... .....191..

Day	No.	Name	Item	Sym	Appropriations	Special Revenue Bond Funds	✓

Form 9. Register of Miscellaneous Claims

REGISTER OF OBLIGATIONS INCURRED BY CONDEMNATION PROCEEDINGS Month of .....191...

Day	No.	Name	Item	Sym.	Detail	Amount	✓

Form 10. Register of Obligations Incurred by Condemnation Proceedings

RECORD OF CONTRACT ORDERS

LINE NO..... LINE NO.....
ARTICLE..... PRICE..... ARTICLE..... PRICE.....
QUANTITY..... AMOUNT..... QUANTITY..... AMOUNT.....

DATE	ORD. NO.	QUANTITY ORDERED	QUANTITY RECEIVED	AMOUNT	BALANCE	DATE	ORD. NO.	QUANTITY ORDERED	QUANTITY RECEIVED	AMOUNT	BALANCE

Form 11. *Record of Contract Orders*

RECORD OF OPEN MARKET ORDERS

ARTICLE _____

ORDERS						LIQUIDATIONS								
DATE	NO.	QUANT.	AMOUNT		VENDOR	RECEIPTS		INVOICES			ADJUSTMENTS		VOUCH. NO.
						ORD. NO.	QUANT.	DATE	AMOUNT		+	−	

Form 12. Record of Open Market Orders

CHAPTER XXXII

FORMS RELATING TO DISBURSEMENTS

DEPARTMENT OF.....
CITY OF NEW YORK.

NEW YORK.....191....

I hereby certify that the items in this bill of.....amounting to the sum of $.....were received on the .....day of.....; that the services specified therein have been duly and properly performed, or that the articles enumerated have been furnished (quantity and quality as ordered) and are for the exclusive use of this Department.

Name.....

(Official Station).....

Form 13a. *Voucher Stamp—General Form*

Date.....

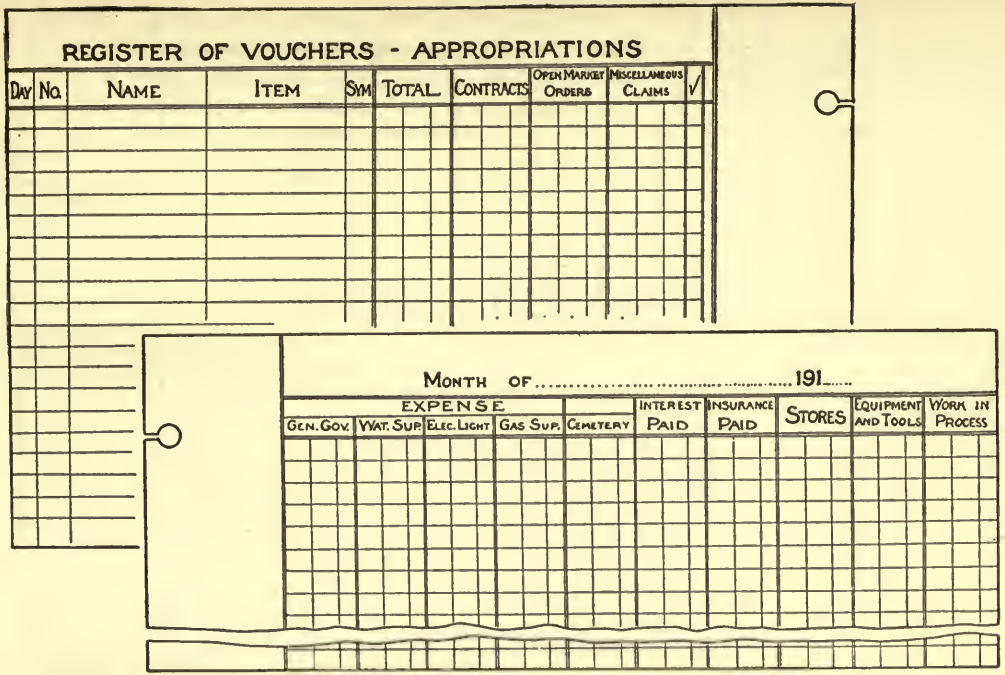
DEPARTMENT OF.....

I hereby certify that the articles covered by this invoice, (1) have been received by me, (2) inspected as to quality, (3) and found correct as to quantity with the exceptions noted.

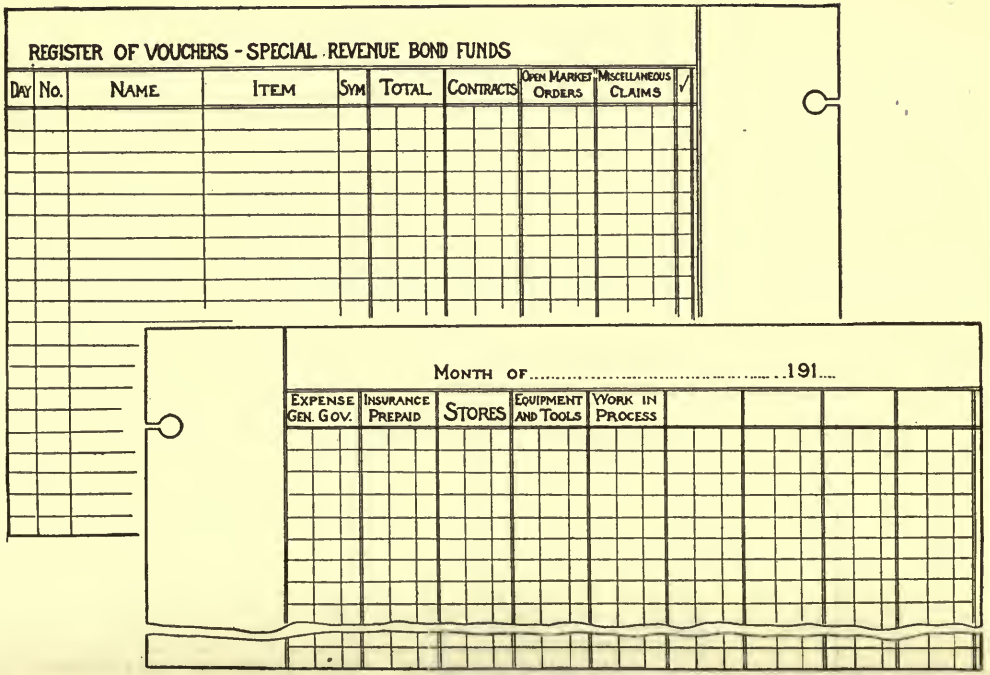
Signed.....

Storekeeper.

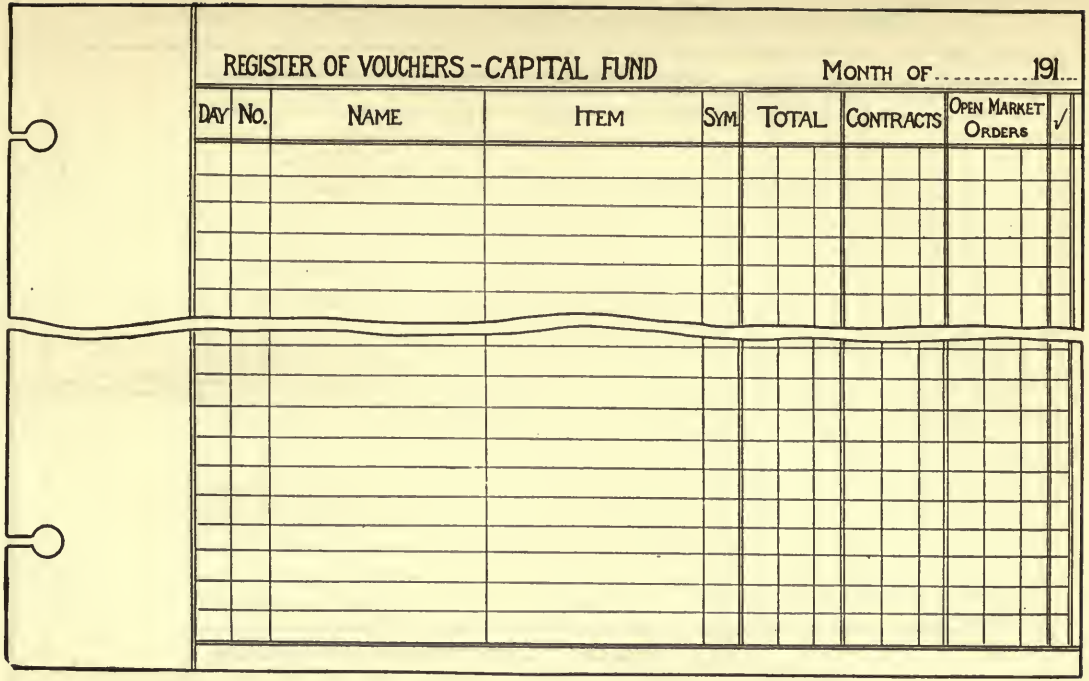
Form 13b. *Voucher Stamp—Storekeeper's Form*



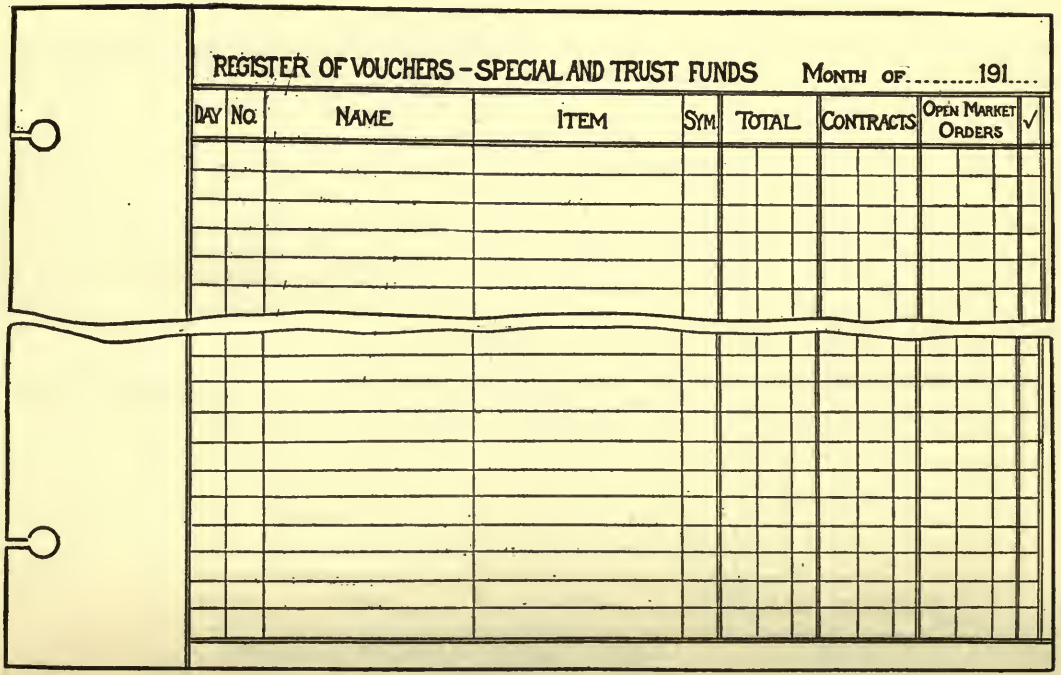
Form 14. Register of Vouchers—Appropriations—Front and Back



Form 15. Register of Vouchers—Special Revenue Bond Funds—Front and Back



Form 16. Register of Vouchers—Capital Fund



Form 17. Register of Vouchers—Special and Trust Funds

REGISTER OF VOUCHERS – SINKING FUNDS Month of.....191...

Day	No.	Name	Item	Sym	Total	Principal	Premium	✓

Form 18. Register of Vouchers—Sinking Funds

NAME

ADDRESS

SINGLE MARRIED

DATE	EMPLOYED AS	TITLE	RATE

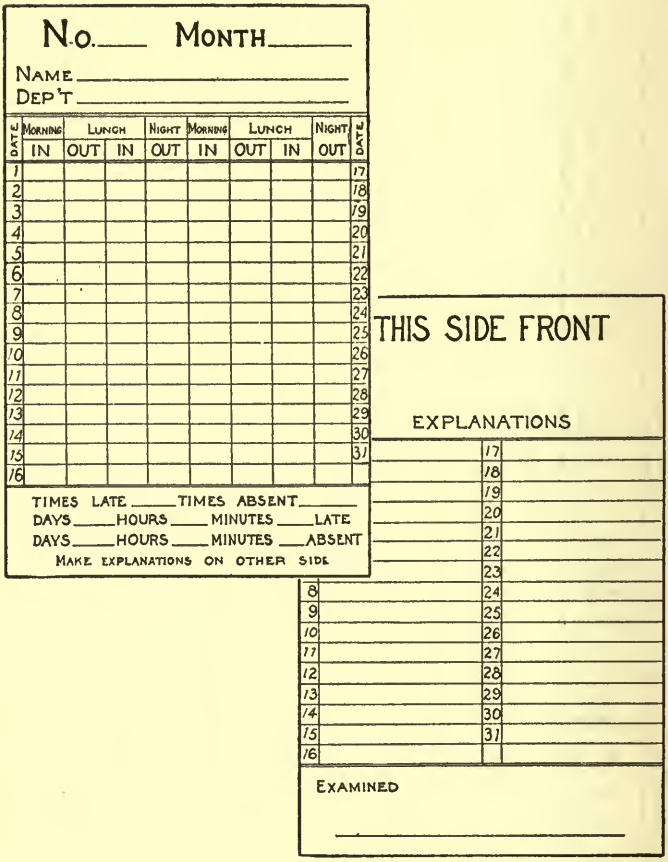
DATE		REASONS	BY
	DISCHARGED		
	LEFT EMPLOY		
	REINSTATED		

Form 19. Employee's Record Card

CLOCK NO._____

LINE	NAME	DATE EMPLOYED	DATE LEFT

Form 20. Record of Clock Numbers



No.____ Month_____

Name_____

Dep't_____

Date	Morning IN	Lunch OUT	Lunch IN	Night OUT	Morning IN	Lunch OUT	Lunch IN	Night OUT	Date
1									17
2									18
3									19
4									20
5									21
6									22
7									23
8									24
9									25
10									26
11									27
12									28
13									29
14									30
15									31
16									

TIMES LATE_____TIMES ABSENT_____

DAYS_____HOURS_____MINUTES_____LATE

DAYS_____HOURS_____MINUTES_____ABSENT

MAKE EXPLANATIONS ON OTHER SIDE

THIS SIDE FRONT

EXPLANATIONS

		17	
		18	
		19	
		20	
		21	
		22	
		23	
8		24	
9		25	
10		26	
11		27	
12		28	
13		29	
14		30	
15		31	
16			

EXAMINED

_____

Form 21. Monthly Clock Card

DAILY TIME REPORT

I HEREBY CERTIFY THAT THE FOLLOWING RECORD OF SERVICES PERFORMED BY ME THIS DAY IS CORRECT:

NAME _____

TITLE OF POSITION OR CIVIL SERVICE TITLE _____ DATE _____ 191_

A.M.		P.M.		HOURS ON DUTY		HOURS ABSENT	
ARRIVED	DEPARTED	ARRIVED	DEPARTED	ASSIGNED	NOT ASSIGNED	EXCUSED	NOT EXCUSED

DESCRIPTION AND LOCATION OF WORK	CHARGEABLE TO	HOURS	AMOUNT

DEPARTMENT _____ BUREAU _____ EXAMINED AND APPROVED _____

Form 22. Daily Time Report

DISTRIBUTION TIME SHEET

NAME _____ MONTH ENDING _____ 191__

DAY	APPROPRIATION AND BOND FUND ACCOUNTS										TOTAL
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											
31											
HOURS											
AMOUNT											

Form 23. Distribution Time Sheet

PAYROLL ANALYSIS

DEPARTMENT..... MONTH ENDED..... 191....

EMPLOYEE'S No.	NAME	APPROPRIATION AND BOND FUND ACCOUNTS						TOTAL EARNED

Form 24. Pay-Roll Analysis

PAYROLL SERIAL No.....

DEPARTMENT..... MONTH ENDED.....191....

EMP. No.	TITLE OF APPROPRIATION OR BOND FUND ACCOUNT EMPLOYEE'S NAME	EMPLOYEE'S ADDRESS	EMPLOYEE'S SIGNATURE	FROM	TO	RATE	AMOUNT	TOTAL

Form 25. Straight Pay-Roll

PAYROLL

SERIAL NO.....

DEPARTMENT..... MONTH ENDED..... 191..

EMP. NO.	NAME	ADDRESS	SIGNATURE	APPROPRIATION OR BOND FUND ACCOUNT	AMOUNT	TOTAL

Form 26. Split Pay-Roll

RECAPITULATION OF PAYROLLS

DEPARTMENT..... MONTH ENDED..... 191...

CODE NO.	TITLE OF APPROPRIATION OR BOND FUND ACCOUNT	SERIAL NUMBERS				TOTAL	√	PRO RATA ALLOWANCES	ACCUMULATED TO DATE	EXPENDED TO DATE	YEARLY ALLOWANCE
		AMOUNT	AMOUNT	AMOUNT	AMOUNT						

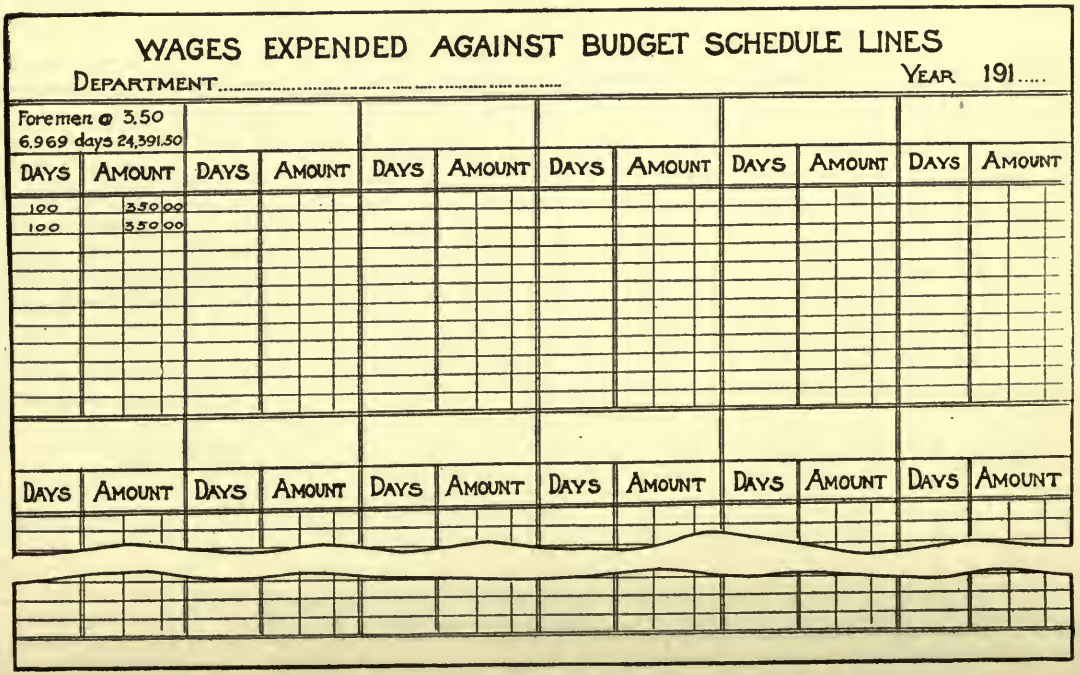
Form 27. Recapitulation of Pay-Rolls

SALARIES EXPENDED, AND UNEXPENDED BALANCES

DEPARTMENT..... YEAR 191.....

BUDGET SCHEDULE LINES	JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE	
	EXPENDED	BALANCE	EXPENDED	BALANCE	EXPENDED	BALANCE	EXPENDED	BALANCE	EXPENDED	BALANCE	EXPENDED	BALANCE

Form 28. Record of Salaries Expended, and Unexpended Balances


WAGES EXPENDED AGAINST BUDGET SCHEDULE LINES

DEPARTMENT..... YEAR 191.....

Foremen @ 3.50
6,969 days 24,391.50

DAYS	AMOUNT	DAYS	AMOUNT	DAYS	AMOUNT	DAYS	AMOUNT	DAYS	AMOUNT	DAYS	AMOUNT
100	350 00										
100	350 00										

DAYS	AMOUNT	DAYS	AMOUNT	DAYS	AMOUNT	DAYS	AMOUNT	DAYS	AMOUNT	DAYS	AMOUNT

Form 29. Record of Wages Expended Against Budget Schedule Lines

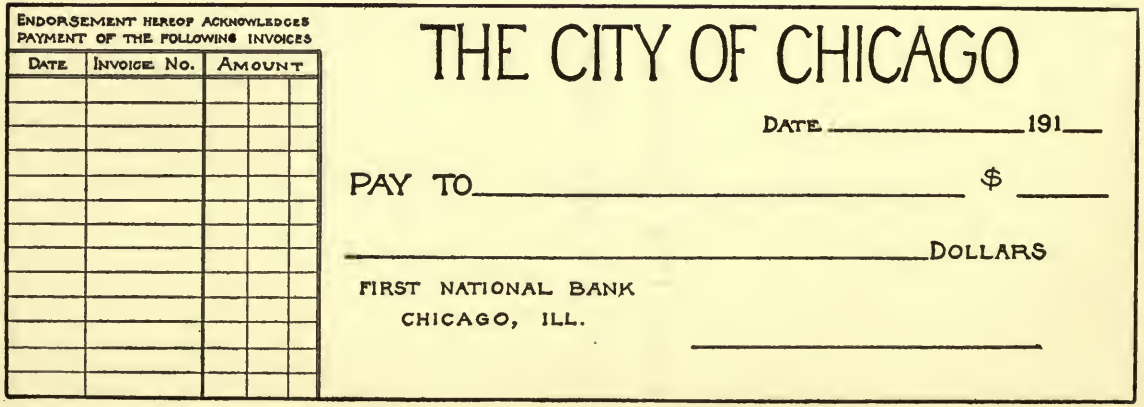
REGISTER OF JUDGMENTS AND MANDAMUSES MONTH OF.....191...

DAY	No.	NAME	DESCRIPTION	SYM	WORK IN PROCESS		REAL EST. PUR.	√
					APPROPRIATIONS	SP. REV. BOND FUNDS	CAPITAL FUND	

Form 30. Register of Judgments and Mandamuses

CHAPTER XXXIII

CHECKS AND CHECK REGISTERS



ENDORSEMENT HEREOF ACKNOWLEDGES PAYMENT OF THE FOLLOWING INVOICES

DATE	INVOICE NO.	AMOUNT		

THE CITY OF CHICAGO

DATE _____ 191__

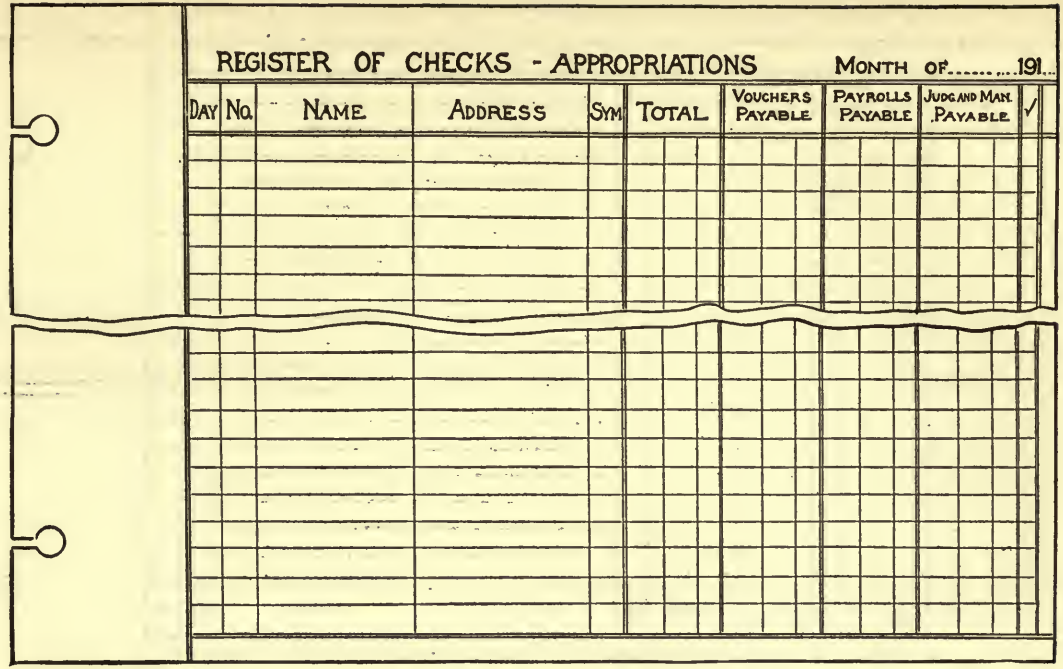
PAY TO _____ $ _____

_____ DOLLARS

FIRST NATIONAL BANK
CHICAGO, ILL.

_____

Form 31. Voucher Check



Form 32. Register of Checks—Appropriations

REGISTER OF CHECKS - SPECIAL REVENUE BOND FUNDS Month of ..... 191..

Day	No.	Name	Address	Sym.	Total	Vouchers Payable	Payrolls Payable	Judg. and Man. Payable	√

REGISTER OF CHECKS — CAPITAL FUND MONTH OF.....191...

DAY	NO.	NAME	ADDRESS	SYM	TOTAL	VOUCHERS PAYABLE	PAYROLLS PAYABLE	JUDGMENTS PAYABLE	✓

Form 34. Register of Checks—Capital Fund

REGISTER OF CHECKS-SINKING FUND MONTH OF.....191..

DAY	No.	NAME	ADDRESS	SYM	VOUCHERS PAYABLE	✓

Form 35. Register of Checks—Sinking Fund

REGISTER OF CHECKS - SPECIAL AND TRUST FUNDS MONTH OF..... 191...

DAY	NO.	NAME	ADDRESS	SYM	TOTAL	VOUCHERS PAYABLE	PAYROLLS PAYABLE	✓

Form 36. Register of Checks—Special and Trust Funds

CHAPTER XXXIV

FORMS RELATING TO STORES

STOCK LIMITS	UNITS
MAXIMUM	
MINIMUM	

STORES LEDGER

DEPARTMENT OF _____

LOCATION OF STORES _____

SIZE

DESCRIPTION

STOCK NO.

ORDERED				RECEIVED					ISSUED					BALANCE	ISSUED					BALANCE
DATE	ORD. NO.	QUANT.	REMARKS	DATE	ORD. NO.	QUANT.	UNIT COST	AMOUNT	DATE	REQ. NO.	QUANT.	UNIT COST	AMOUNT	QUANT.	DATE	REQ. NO.	QUANT	UNIT COST	AMOUNT	QUANT.

REQUISITION ON STOREKEEPER

TO COVER MEATS AND FISH DELIVERED TO THE VARIOUS KITCHENS FOR THE MONTH OF _____ 191_

AVERAGE CENSUS	KITCHENS				
	DOCTOR'S	NURSE'S	HELP'S	PATIENTS'	TOTAL ALL KITCHEN'S
ARTICLE	LBS.	LBS.	LBS	LBS	LBS
FORES					
RIBS					
CHUCK					
NAVEL, BRISKET, STEW					
HINDS					
PORTERHOUSE, SIRLOIN					
TOP SIRLOIN, TOP AND BOTTOM ROUND					
SOUP AND STEW					
LAMBS					
LEGS					
CHOPS					
SOUP AND STEW					
OTHER					
CHICKEN					
ROAST PORK					
SAUSAGE					
BACON					

PREPARED BY _____

APPROVED BY _____

Form 38. Requisition on Storekeeper

REQUISITION ON STOREKEEPER

MR._____ DATE _____

PLEASE DELIVER THE FOLLOWING GOODS:-

AVERAGE CENSUS		KITCHENS				
		DOCTOR'S	NURSE'S	HELP'S	PATIENTS'	TOTAL ALL KITCHENS
ARTICLE	UNIT	QUANT.	QUANT.	QUANT.	QUANT.	QUANT.
BREAD						
MILK						
CREAM						
BUTTER						
CHEESE						
EGGS						
ORANGES						
LEMONS						
PINEAPPLES						
PARSLEY						
POTATOES						
CARROTS						
CABBAGE						
STRING BEANS						
BANANAS						
ICE CREAM						

PREPARED BY _____

APPROVED BY _____

Form 39. Requisition on Storekeeper

REQUISITION ON STOREKEEPER

MR. _____ DATE _____

PLEASE DELIVER THE FOLLOWING GOODS:-

AVERAGE CENSUS		KITCHENS				
		DOCTOR'S	NURSE'S	HELP'S	PATIENT'S	TOTAL ALL KITCHENS
ARTICLE	UNIT	QUANT.	QUANT.	QUANT.	QUANT.	QUANT.
APRICOTS						
BEANS						
CATSUP						
CHOCOLATE						
CINNAMON						
COCOA						
COFFEE						
CORN						
CRACKERS						
CREAM OF WHEAT						
FARINA						
LARD						
MEAL						
OLIVE OIL						
RAISINS						
TEA						
VINEGAR						

PREPARED BY _____ APPROVED BY _____

Form 40. Requisition on Storekeeper

REQUISITION ON STOREKEEPER

MR._____ DATE_____

PLEASE DELIVER THE FOLLOWING GOODS TO_____ DEP'T.

QUANT.	ARTICLE	QUANT.	ARTICLE
	WEARING APPAREL		NICKEL AND SILVERWARE
	CAPS		FORKS - DESSERT
	SHIRTS		" DINNER
	ROBES BATH		KNIVES - DESSERT
	STOCKINGS MEN'S		" DINNER
	" WOMEN'S		SPOONS - TEA
	CLEANING SUPPLIES AND EQUIPMENT		CHINA, CROCKERY AND GLASSWARE
	BON AMI		BAKERS
	BROOMS		CUPS
	BRUSHES		PLATES 5"
	SAPOLIO		" 7"
	SOAP		SAUCERS
	AGATE AND ENAMELED WARE		DRY GOODS, BEDDING AND NOTIONS
	BASINS - WASH		SPREADS - BED
	BOILERS		SHEETS
	DISHES - PUDDING		PILLOW CASES
	KETTLES - TEA		TOWELING
	POTS - COOKING		COMBS

PREPARED BY _____

APPROVED BY _____

Form 41. Requisition on Storekeeper

REQUISITION ON STOREKEEPER

MR._____ DATE_____

PLEASE DELIVER THE FOLLOWING GOODS.

CHARGE TO

QUANTITY	UNIT	DESCRIPTION	AMOUNT

PREPARED BY _____

APPROVED BY _____

Form 42. Requisition on Storekeeper

STORES ISSUED TO DOCTORS' KITCHEN AND DINING ROOM MONTH OF _____ 191_

REQ. NO. / DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	TOTAL QUANTITY	UNIT	PRICE	AMOUNT
APRICOTS																																			
BEANS																																			
CATSUP																																			
CHOCOLATE																																			
CINNAMON																																			
COCOA																																			
COFFEE																																			
CORN																																			
CRACKERS																																			
CREAM OF WHEAT																																			
FARINA																																			
LARD																																			
MEAL																																			
OLIVE OIL																																			
RAISINS																																			
TEA																																			
VINEGAR																																			

Form 43. Distribution Sheet of Stores (Issued to Doctors' Kitchen and Dining Room)

REGISTER OF STORES REQUISITIONS Month of_____ 191_

Day	No.	Item	Sym	Total	Expense					Work in Progress	√
					Gen. Gov.	Wat. Sup.	Elec. Light	Gas Supply	Cemeteries		

Form 44. Register of Stores Requisitions

CHAPTER XXXV

FORMS RELATING TO COSTS

PER CAPITA COST STATEMENT

DEPARTMENT OF _____ MONTH ENDED _____, 191__

FUNCTIONS	NAME OF INSTITUTION					TOTAL
EXECUTIVE						
AUDIT AND ACCOUNTS						
PURCHASE AND STORAGE						
ENGINEERING SUPERVISION						
WARDS						
PHARMACY						
LABORATORY						
DOCTORS' KITCHEN AND DINING ROOM						
NURSES' KITCHEN AND DINING ROOM						
HELPS' KITCHEN AND DINING ROOM						
PATIENTS' KITCHEN						
HOUSEKEEPING AND DORMITORIES						
LAUNDRY						
MORGUE						
STABLE AND AMBULANCE SERVICE						
LIGHT, HEAT AND POWER						
CARE OF BUILDINGS						
CARE OF GROUNDS						
TOTAL						
PATIENT DAYS						
PER CAPITA COST						

Form 45. Per Capita Cost Statement

AVERAGE COST PER MEAL FOR KITCHEN AND DINING ROOM SERVICE

NAME OF INSTITUTION_____ MONTH ENDED_____ 191__

EXPENSE CLASSIFICATIONS	DOCTOR'S' KITCHEN AND DINING ROOM			NURSE'S' KITCHEN AND DINING ROOM			HELP'S KITCHEN AND DINING ROOM			PATIENT'S' KITCHEN			TOTAL		
PERSONAL SERVICE															
FOOD SUPPLIES															
REFRIGERATING SUPPLIES															
FUEL SUPPLIES															
CLEANING SUPPLIES															
GENERAL PLANT SUPPLIES															
HOUSEHOLD EQUIPMENT															
REPLACEMENTS															
REPAIRS															
GENERAL PLANT EQUIPMENT															
REPLACEMENTS															
REPAIRS															
REPAIRS TO BUILDINGS															
DEPARTMENTAL															
CONTRACT															
TOTAL															
NUMBER OF MEALS SERVED															
AVERAGE COST PER MEAL															

Form 46. Cost of Kitchen and Dining Room Service

LAUNDRY COSTS AND PRODUCTION

LAUNDRY LOCATED AT_____ MONTH ENDED_____

EXPENSE CLASSIFICATIONS	HAND WORK			FLAT WORK			KITCHEN EXPENSE			TOTAL		
PERSONAL SERVICE												
LAUNDRY SUPPLIES												
FUEL SUPPLIES												
DISINFECTING SUPPLIES												
GENERAL PLANT SUPPLIES												
LAUNDRY EQUIPMENT												
REPLACEMENTS												
REPAIRS												
GENERAL PLANT EQUIPMENT												
REPLACEMENTS												
REPAIRS												
REPAIRS TO BUILDINGS												
DEPARTMENTAL												
CONTRACT												
TOTAL												
KITCHEN EXPENSE												
TOTAL												
PIECES LAUNDERED												
AVERAGE COST PER PIECE												

Form 47. Laundry Costs and Production

MOTOR VEHICLE DAILY REPORT

CAR _____ DATE _____

DEP'T. GARAGE AT _____ O'CLOCK RETURNED FOR DAY AT _____ O'CLOCK

CYCLOMETER OUT _____ CYCLOMETER IN _____

GASOLINE SUPPLIED _____ GASOLINE USED _____

TIME OF TRIPS			DESCRIPTION	IN CHARGE
BEGAN	ENDED	ELAPSED TIME		

AUTOMOBILE ENGINE MAN

Form 48. Motor Vehicle Daily Report

MOTOR VEHICLE SERVICE COSTS

DEP'T OF _____ MONTH ENDED _____

EXPENSE CLASSIFICATIONS	CAR No.	HP.	CAR No.	HP.	CAR No.	HP.	CAR No.	HP.	CAR No.	HP.	CAR No.	HP.	CAR No.	HP.
PERSONAL SERVICE														
MOTOR VEHICLE SUPPLIES														
CLEANING SUPPLIES														
GENERAL PLANT SUPPLIES														
STORAGE OF MOTOR VEHICLES														
WEARING APPAREL														
TIRES AND INNERTUBES														
REPLACEMENTS														
REPAIRS														
ENGINE, CHASSIS AND BODY														
REPLACEMENTS														
REPAIRS														
APPURTENANCES														
REPLACEMENTS														
REPAIRS														
TOTAL														
MILES RUN														
AVERAGE COST PER MILE														
MILES PER GALLON OF GASOLINE														

Form 49. Monthly Summary of Motor Vehicle Service Costs

1

DAILY TIME REPORT

NAME Julius Garibaldi DATE Jan. 1 1912

UNITS	TIME	W.O. No.	UNITS	TIME	W.O. No.
12.0	6.00 A.M.		6.0	12.00 M.	
11.9	.06		5.9	.06 P.M.	
11.8	.12		5.8	.12	
11.7	.18		5.7	.18	
11.6	.24		5.6	.24	
11.5	.30		5.5	.30	
11.4	.36		5.4	.36	
11.3	.42		5.3	.42	
11.2	.48		5.2	.48	
11.1	.54		5.1	.54	
11.0	7.00		5.0	1.00	
10.9	.06		4.9	.06	
10.8	.12		4.8	.12	
10.7	.18		4.7	.18	
10.6	.24		4.6	.24	
10.5	.30		4.5	.30	
10.4	.36		4.4	.36	
10.3	.42		4.3	.42	
10.2	.48		4.2	.48	
10.1	.54		4.1	.54	
10.0	8.00		4.0	2.00	
9.9	.06		3.9	.06	
9.8	.12		3.8	.12	
9.7	.18		3.7	.18	
9.6	.24		3.6	.24	
9.5	.30		3.5	.30	
9.4	.36		3.4	.36	
9.3	.42		3.3	.42	
9.2	.48		3.2	.48	
9.1	.54		3.1	.54	
9.0	9.00		3.0	3.00	
8.9	.06		2.9	.06	
8.8	.12		2.8	.12	
8.7	.18	W.O. 1.	2.7	.18	
8.6	.24		2.6	.24	
8.5	.30		2.5	.30	
8.4	.36	10. @ $.75	2.4	.36	
8.3	.42	7.	2.3	.42	
8.2	.48	3. @ .25 = .75	2.2	.48	
8.1	.54		2.1	.54	
8.0	10.00		2.0	4.00	
7.9	.06		1.9	.06	
7.8	.12		1.8	.12	
7.7	.18		1.7	.18	
7.6	.24		1.6	.24	
7.5	.30		1.5	.30	
7.4	.36		1.4	.36	
7.3	.42		1.3	.42	
7.2	.48		1.2	.48	
7.1	.54		1.1	.54	
7.0	11.00		1.0	5.00	
6.9	.06	W.O. 2.	.9	.06	
6.8	.12	7. @ $.25 = $1.25	.8	.12	
6.7	.18	1.	.7	.18	
6.6	.24		.6	.24	
6.5	.30		.5	.30	
6.4	.36		.4	.36	
6.3	.42		.3	.42	
6.2	.48		.2	.48	
6.1	.54		.1	.54	

W.O. 3 @ $1.25
5. @ .25 = 1.25

HOURS 9 RATE .25 AMOUNT 2.25

Job 1. .75.
2. .25
3 1.25

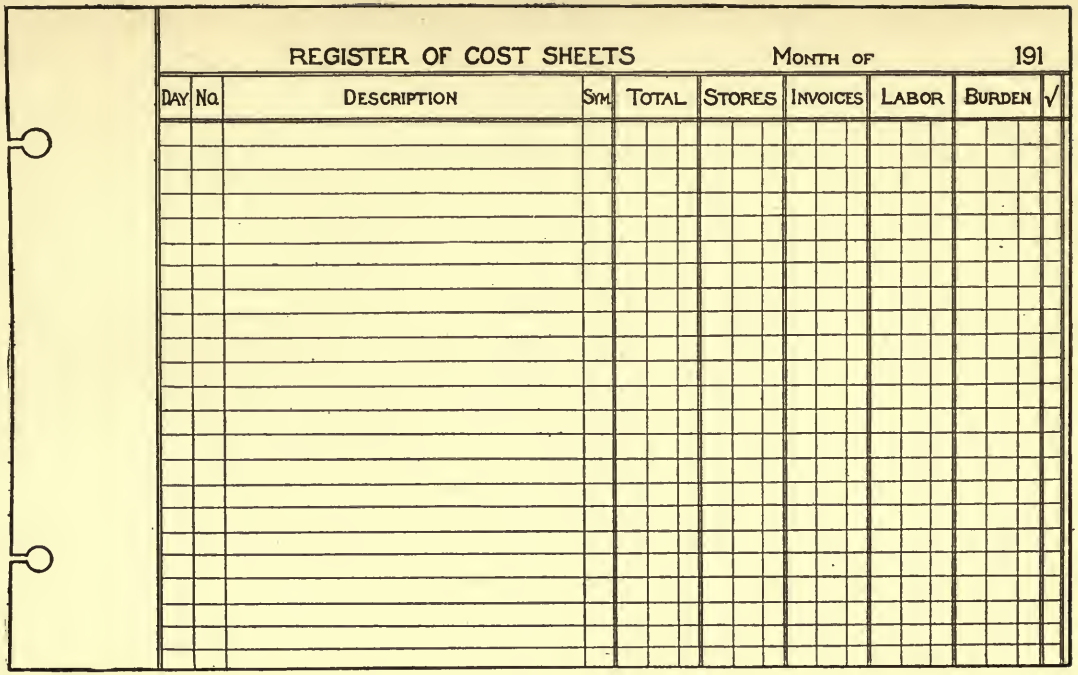
Form 50. Daily Time Report

COST SUMMARY

STORES		INVOICES	

NO.	NAME	LABOR	BURDEN	SUMMARY	
				STORES	
				INVOICES	
				LABOR	
				BURDEN	
				TOTAL	
				COST PER	

Form 51. Cost Summary



Form 52. Register of Cost Sheets

CHAPTER XXXVI

FORMS OF RECORDS AND REGISTERS

REAL ESTATE RECORD

NAME _____ MAP NO. _____ BLOCK NO. _____ LOT NO. _____

ADDRESS _____ ABSTRACT NO. _____ PAGE _____

LOCATION OF REAL ESTATE _____

NO. _____ SIDE _____ STREET _____

YEAR	BUILDINGS				VALUE	LAND AREA		PRICE	VALUE	TOTAL
	HOUSE	BARN	SHOP	SHED	BUILDINGS	ACRES	SQ. FT	PER FOOT	LAND	REAL ESTATE

Form 53. Real Estate Record

PERSONAL PROPERTY RECORD

NAME _____ WARD _____ PRECINCT _____

ADDRESS _____

YEAR	HAS REAL EST.	POLL	AGE	OCCUPATION	PREVIOUS RESIDENCE	DOGS		STOCK IN TRADE	MACHINERY	HORSES	COWS	OTHER CATTLE	SWINE	FOWL	AUTO.	CARRIAGES	OTHER	MILITARY
						M.	F.											

Form 54. Personal Property Record

VALUATION HISTORY

CARD NO. _____ STREET _____ WARD. _____

PROPERTY LOCATED AT _____ PLOT _____ LOT _____

YEAR	OWNER	BUILDINGS				LAND AREA		LAND VALUE	TOTAL
		HOUSE	BARN	SHED	SHOP	ACRES	SQ. FT.		

Form 55. Valuation History Record

REGISTER OF DEEDS

NO.	TOWN OF	DEEDS	BLOCK NO.	LOT NO.
HOUSE NO.	STREET		SIDE OF STREET	
GRANTOR				
GRANTEE				
DATE OF RECORD		DEED DATE		REGISTRATION
DESCRIPTION				
PLAN BY		DATED		RECORDED
TRANSFER NOTED ON CARD NO.				INDEXED

Form 56. Register of Deeds

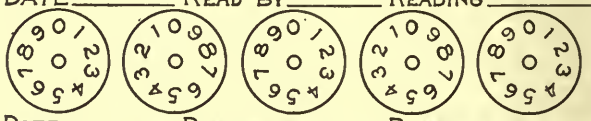
METER READER'S CARD

CONSUMER _____ FOLIO _____

ADDRESS _____ METER NO. _____

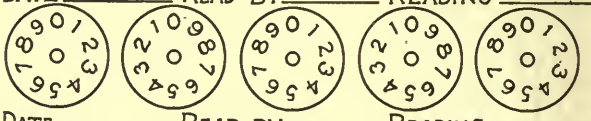
LOCATION OF METER _____

DATE _____ READ BY _____ READING _____



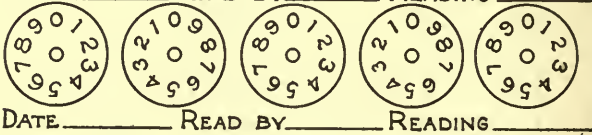
DATE _____ READ BY _____ READING _____

DATE _____ READ BY _____ READING _____



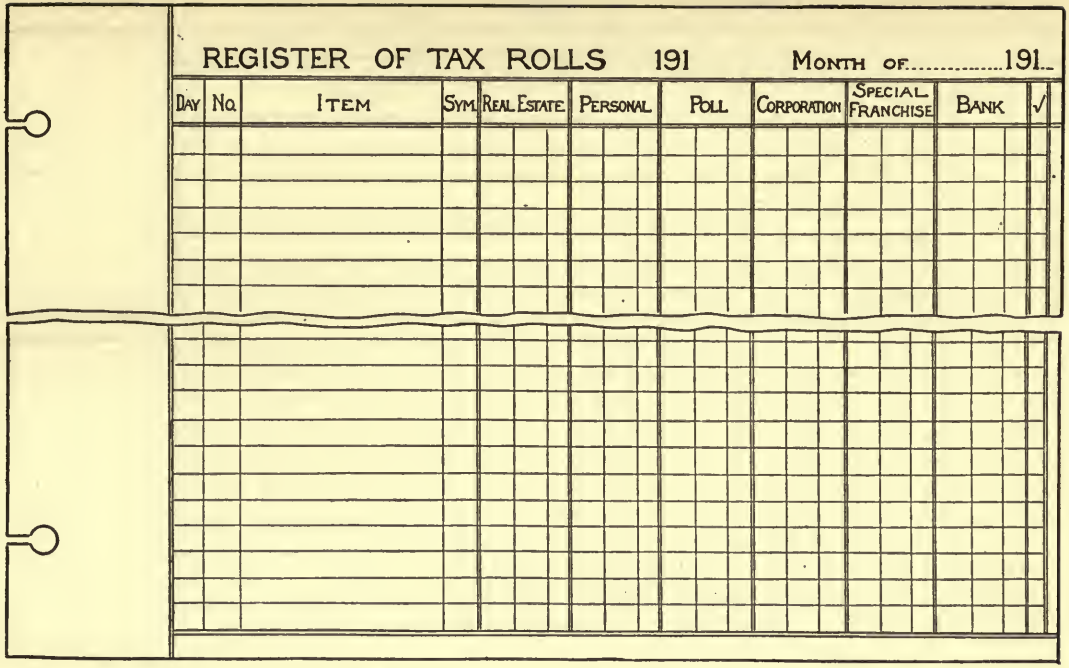
DATE _____ READ BY _____ READING _____

DATE _____ READ BY _____ READING _____



DATE _____ READ BY _____ READING _____

Form 57. Meter Reader's Card

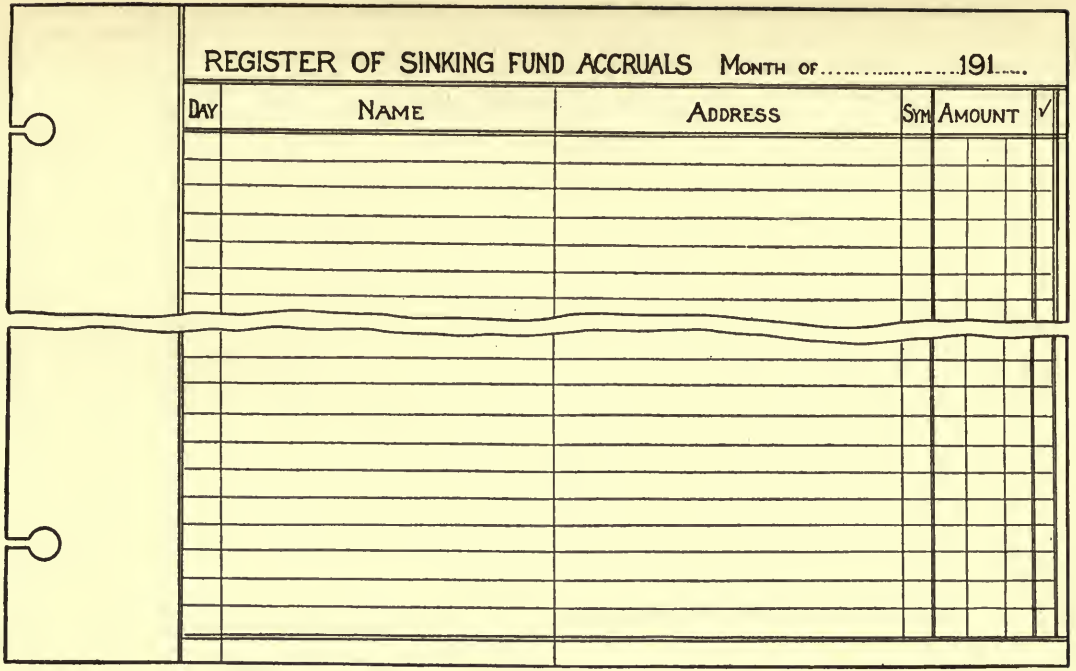


Form 58. Register of Tax Rolls

REGISTER OF DEPARTMENTAL ACCRUALS Month of.....191..

Day	No.	Name	Address	Sym	Water Supply	Electric Light	Gas Supply	Cemeteries and Crematories

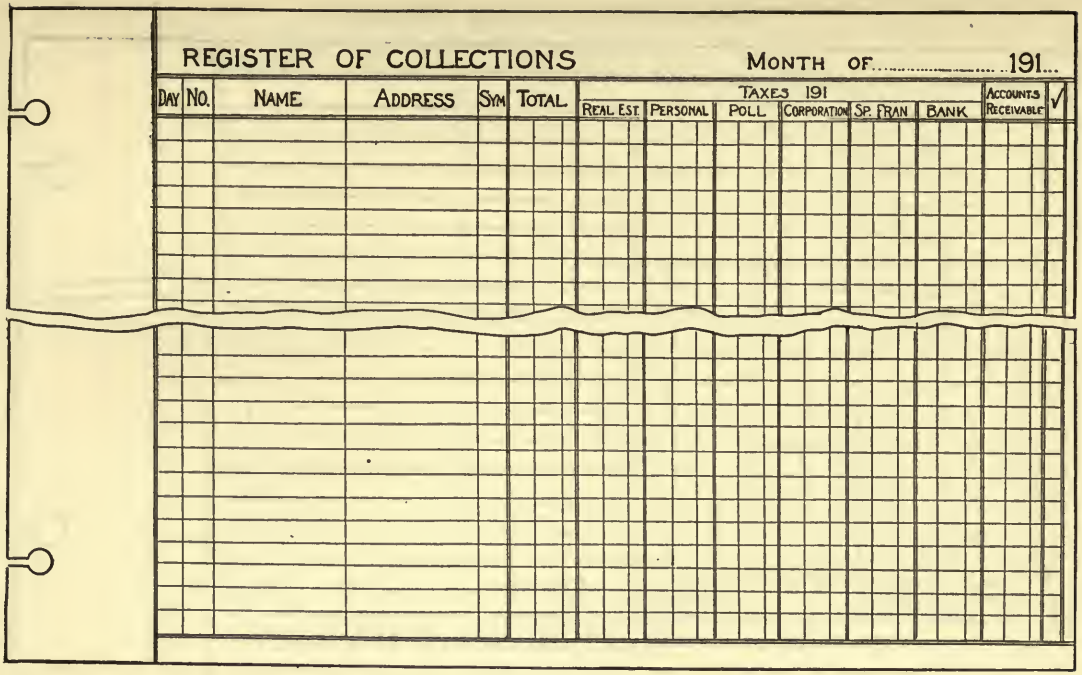
Form 59. Register of Departmental Accruals



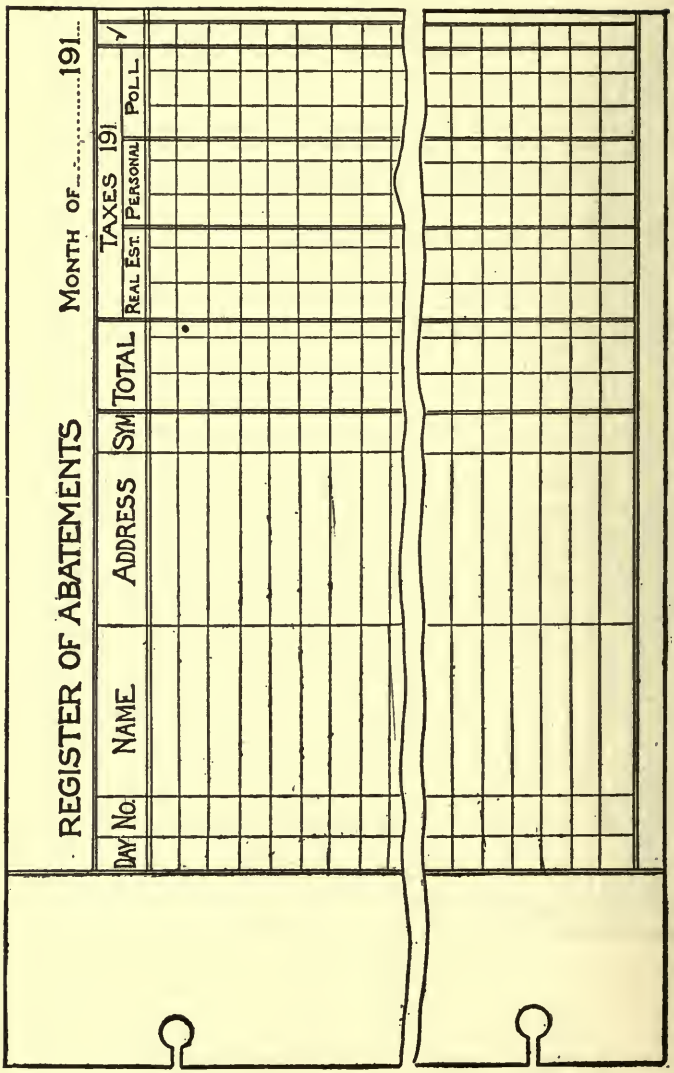
Form 60. Register of Sinking Fund Accruals

REGISTER OF SPECIAL AND TRUST FUND ACCRUALS Month of.....191.....

Day	Name	Address	Sym	Amount	✓



Form 62. Register of Collections



Form 63. Register of Abatements

REGISTER OF RECEIPTS FROM BOND SALES Month of..... 191...

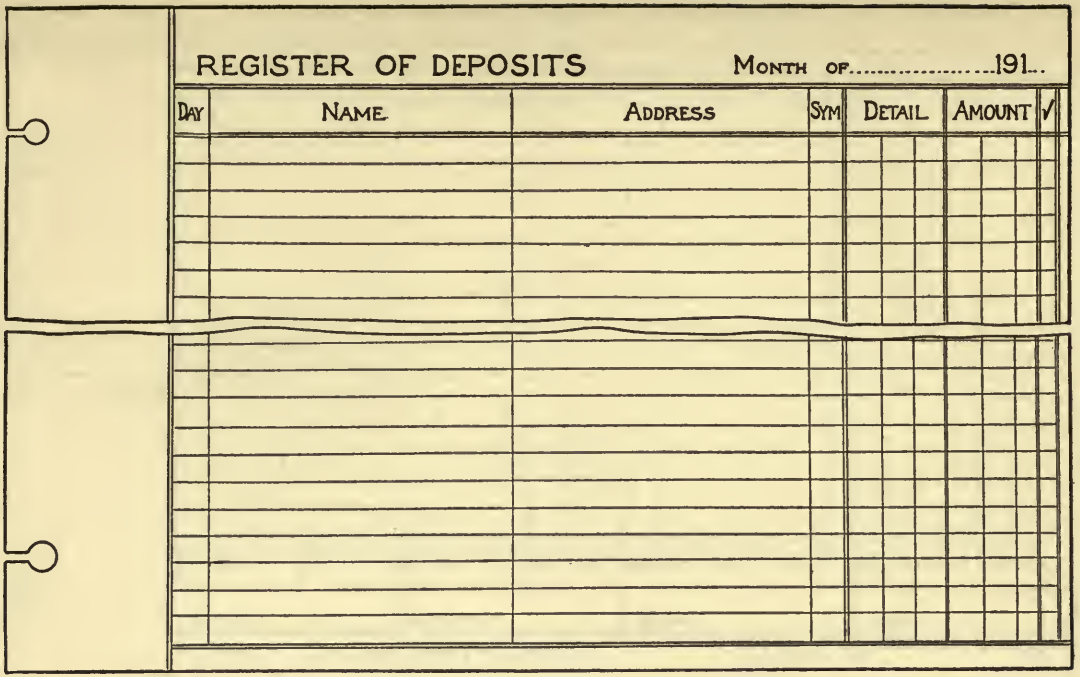
Day	No.	Name	Address	Sym.	Total	Revenue Bonds	Sp. Revenue Bonds	Construction Bonds	Assessment Bonds	✓

Form 64. Register of Receipts from Bond Sales

REGISTER OF TAILINGS Month of..... 191...

Day	No.	Name	Address	Sym	Detail	Total	√

Form 65. Register of Tailings



Form 66. Register of Deposits

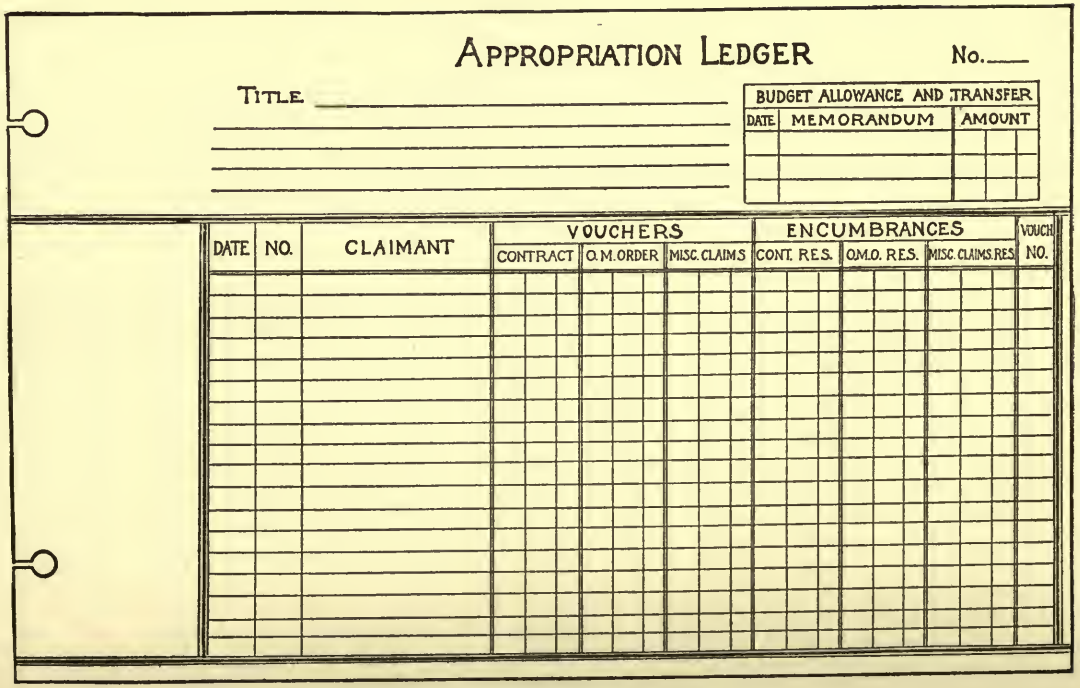
DAILY BANK BALANCES Month of.....191..

Bank			Bank			Bank			Bank		
Day	Deposits	Checks	Day	Deposits	Checks	Day	Deposits	Checks	Day	Deposits	Checks

Form 67. Record of Daily Bank Balances

CHAPTER XXXVII

LEDGER FORMS



APPROPRIATION LEDGER No.____

TITLE _____

BUDGET ALLOWANCE AND TRANSFER		
DATE	MEMORANDUM	AMOUNT

DATE	NO.	CLAIMANT	VOUCHERS			ENCUMBRANCES			VOUCH NO.
			CONTRACT	O.M. ORDER	MISC. CLAIMS	CONT. RES.	O.M.O. RES.	MISC. CLAIMS RES.	

Form 68. Appropriation Ledger

BOND FUND LEDGER

No.___

TITLE _____

AUTHORIZED		PROCEEDS			
DATE	AMOUNT	DATE	PAR	PREMIUM	TOTAL

VOUCHER NUMBER	DATE	ORDER NUMBER	CLAIMANT	VOUCHER NUMBER			CONTRACT RESERVE			OPEN MARKET ORDER RESERVE		
				CONTRACT	O/MORDER	MISC.CLAIMS	DATE	CONT NO.	AMOUNT	DATE	ORD. NO.	AMOUNT

Form 69. Bond Fund Ledger

CONTRACT LEDGER

CONTRACTOR _____ No. _____

DESCRIPTION _____

BIDS OPENED _____ SURETIES _____

CONTRACT AWARDED _____ DATE OF EXPIRATION _____

ACCOUNTS CHARGEABLE

ORDERS				VOUCHERS				ORDER LIQUIDATED	
DATE	NO.	ITEM	AMOUNT	DATE	NO.	ITEM	AMOUNT	NO.	AMOUNT

Form 70. Contract Ledger

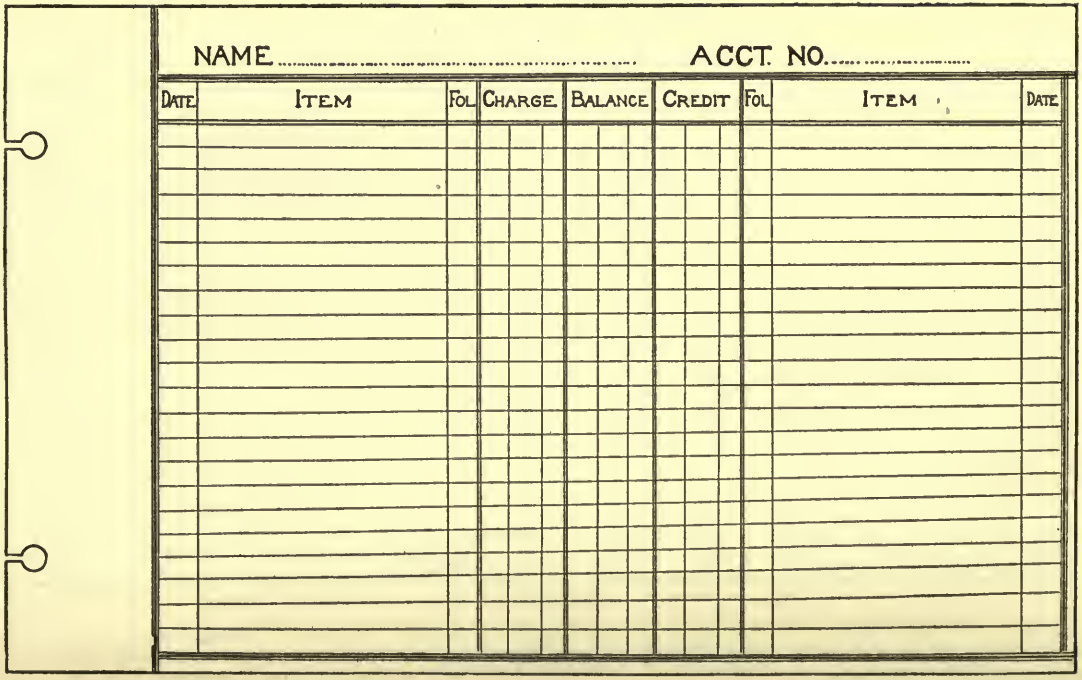
CLAIMANTS LEDGER No.___

NAME _____

ADDRESS _____

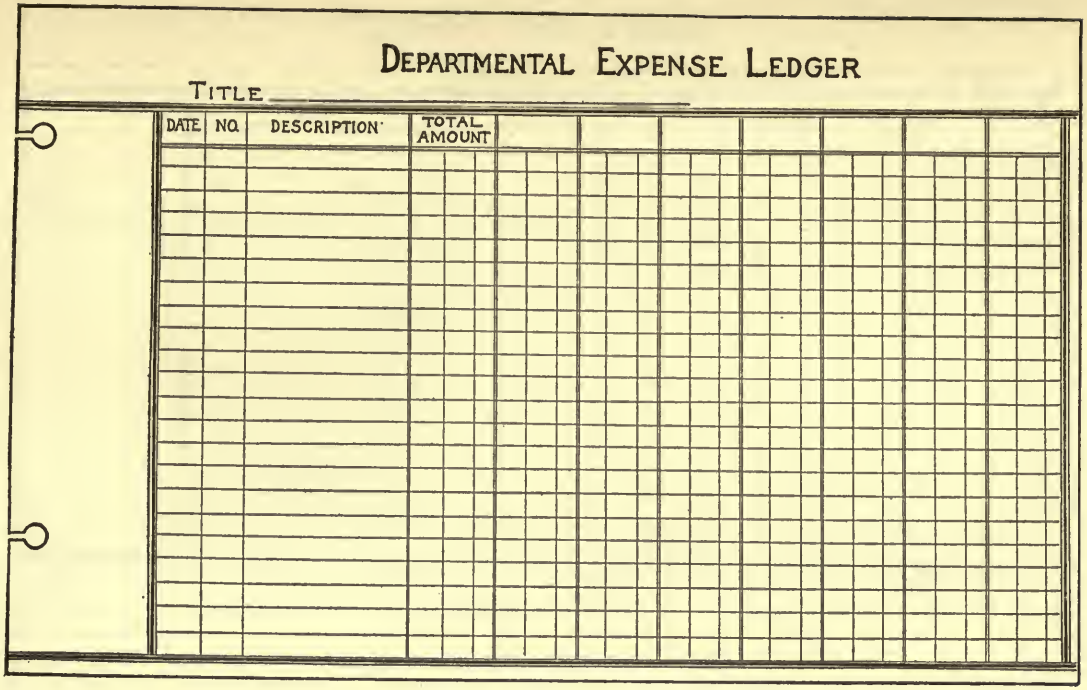
ORDERS				VOUCHERS			ORDER LIQUIDATED	
DATE	NO.	DESCRIPTION	AMOUNT	DATE	NO.	AMOUNT	NO.	AMOUNT

Form 71. Claimants Ledger


NAME ..... ACCT. NO. .....

DATE	ITEM	FOL.	CHARGE.	BALANCE	CREDIT	FOL.	ITEM	DATE

Form 72. Customers or Depositors Ledger



Form 73. Departmental Expense Ledger

PROPERTY LEDGER

DEP'T_____ LOCATION_____ HOW USED_____

WARD_____ BLOCK_____ PLOT_____ MAP_____ PAGE_____

	PARCEL A	PARCEL B	PARCEL C
DATE TITLE VESTED			
DIMENSIONS OF AREA			
DATE BUILDINGS COMPLETED			
TAX VALUE, LAND, YEAR			
" " BUILDINGS, YEAR			
COST OF ACQUISITION			
1. BY PURCHASE			
2. BY CONDEMNATION			
AWARD			
INTEREST			
COST OF NEW BUILDINGS			
" " EQUIPMENT			

Form 74. Property Ledger

EQUIPMENT LEDGER No.___

DESCRIPTION _____

CODE NUMBER _____

DEPARTMENT _____ BUREAU _____ LOCATION _____

EQUIPMENT ACQUIRED					INVENTORY BALANCE			EQUIPMENT DISPOSED OF				
DATE	REF.	QUANTITY	PRICE	AMOUNT	DATE	QUANTITY	AMOUNT	DATE	REF.	QUANTITY	PRICE	AMOUNT

Form 75. Equipment Ledger

LIVE STOCK LEDGER

STOCK NO. _____

DESCRIPTION	DETAILS OF PURCHASE	FINAL DISPOSAL
CLASS	DATE PURCHASED	DATE REMOVED
NAME	FROM WHOM	BY DEATH
COLOR	SELECTED BY	" SALE
SEX	PRICE PAID	" DESTRUCTION
AGE YEARS	DATE RECEIVED	DESTRUCTION ORDERED BY
HEIGHT HANDS	WHEN RAISED FROM STOCK	APPROVED BY
WEIGHT	DATE OF BIRTH	DATE OF DEATH CERTIFICATE
SIZE OF COLLAR	DATE REGISTERED	WHEN DIED
" " BIT	NAME OF VETERINARY SURGEON	AMOUNT REALIZED $
" " SHOES		REASON FOR DESTRUCTION OR SALE
FRONT		
BACK		LENGTH OF SERVICE
		YEARS MONTHS DAYS

Form 76. Live Stock Ledger

CHAPTER XXXVIII

STATEMENT FORMS

COMPARATIVE STATEMENT OF BUDGET ALLOWANCES AND EXPENSE ACCOUNTS

FOR THE MONTH ENDED _____ 191____

LINE NUMBER	APPROPRIATION	AMOUNT ALLOWED	TRANSFERS	TOTAL AS ADJUSTED	PRORATA AS ADJUSTED	EXPENSE PER LEDGER	BALANCE ON EXPENSE LEDGER BASIS

Form 77. Comparative Statement of Budget Allowances and Expense Accounts

STATEMENT OF THE CONDITION OF APPROPRIATIONS

AT THE CLOSE OF BUSINESS _____ 191____

Acct. No.	Title	Appropriation	Vouchers Registered	Unexpended Balance	Encumbrances				Balance
					Contracts Reserve	Open Market Orders Reserve	Miscellaneous Claims Reserve	Total Reserve	

Form 78. Statement of the Condition of Appropriations

STATEMENT OF THE CONDITION OF BOND FUNDS

AT THE CLOSE OF BUSINESS..... 191.....

Acct. No.	Title	Author-ization	Vouchers Registered	Unexpended Balance	Encumbrances				Unincumbered Balance
					Contracts Reserve	Open Market Orders Reserve	Miscellaneous Claims Reserve	Total Reserve	

Form 79. Statement of the Condition of Bond Funds

STATEMENT OF THE CONDITION OF CONTRACTS

AT THE CLOSE OF BUSINESS..... 191....

Cont. No.	Date	Contractor	Nature of Contract	Total Amount	Vouchers Registered	Balance

Form 80. Statement of the Condition of Contracts

INVENTORY OF EQUIPMENT

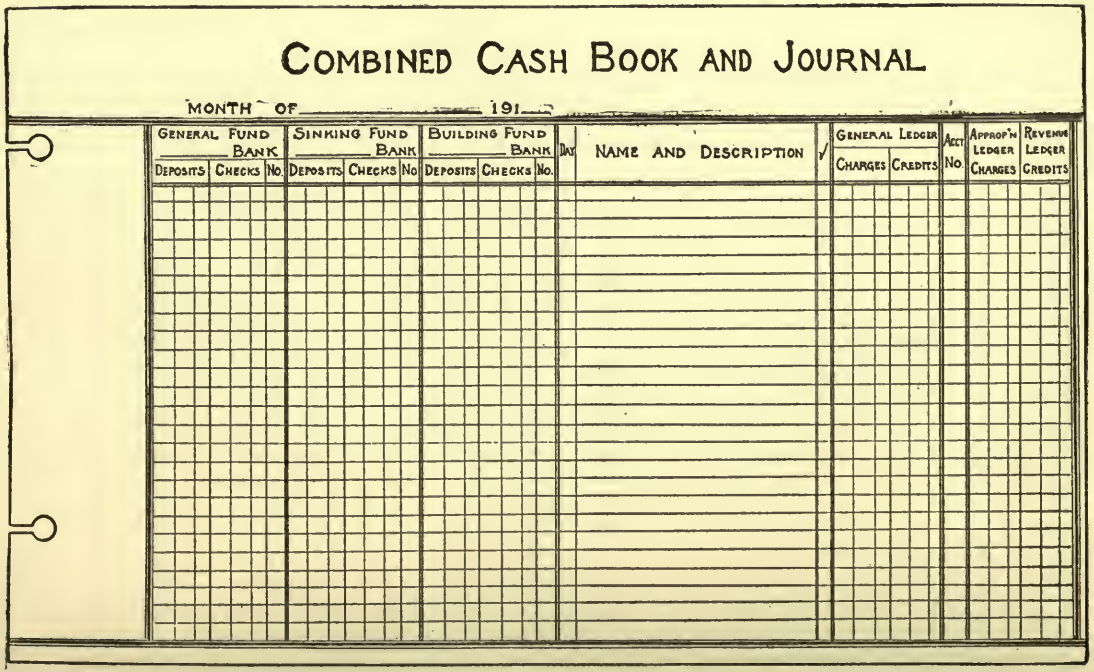
DEPARTMENT..... LOCATION.....

DESCRIPTION OF PROPERTY	PURCHASE ORDER NUMBER	DATE PURCHASED	NUMBER OF UNITS	COST PRICE	TOTAL COST	PRESENT CONDITION	PROBABLE REMAINING LIFE IN YEARS	TOTAL PRESENT VALUE

Form 81. Inventory of Equipment

CHAPTER XXXIX

MISCELLANEOUS FORMS

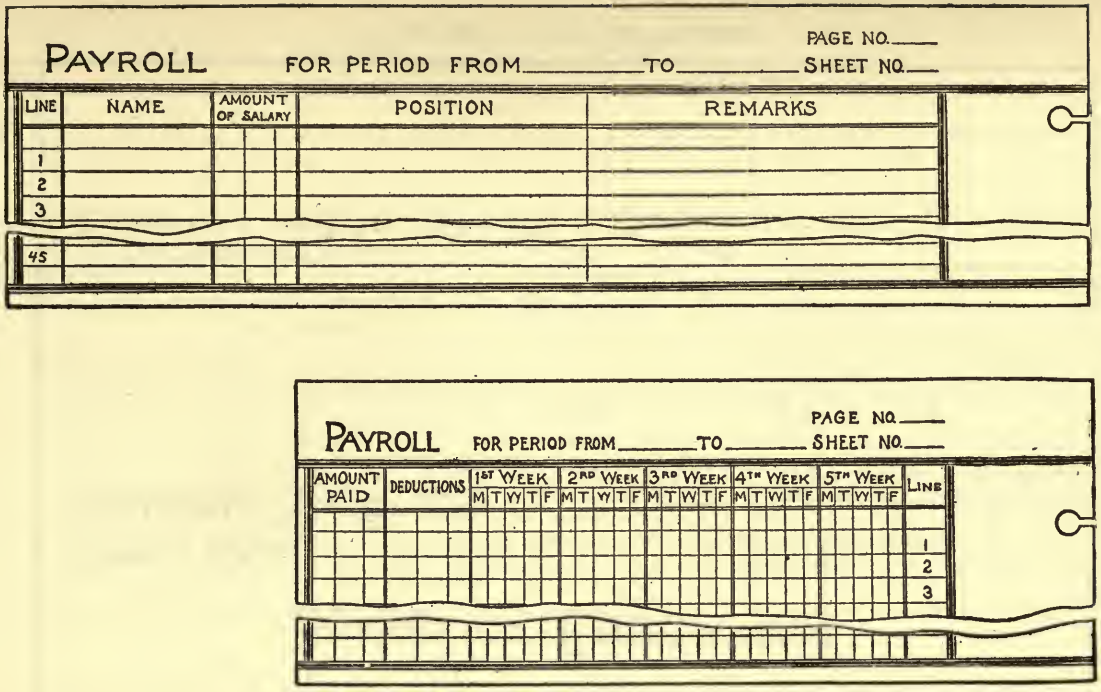


COMBINED CASH BOOK AND JOURNAL

MONTH OF _____ 191_

GENERAL FUND _____ BANK			SINKING FUND _____ BANK			BUILDING FUND _____ BANK			DAY	NAME AND DESCRIPTION	✓	GENERAL LEDGER		ACCT NO.	APPROP'N LEDGER	REVENUE LEDGER
DEPOSITS	CHECKS	NO.	DEPOSITS	CHECKS	NO.	DEPOSITS	CHECKS	NO.				CHARGES	CREDITS		CHARGES	CREDITS

Form 82. Combined Cash Book and Journal



Form 83. Pay-Roll—Master Sheet and Attendance Record

BOARD OF EDUCATION

PETTY CASH
VOUCHER No. 8

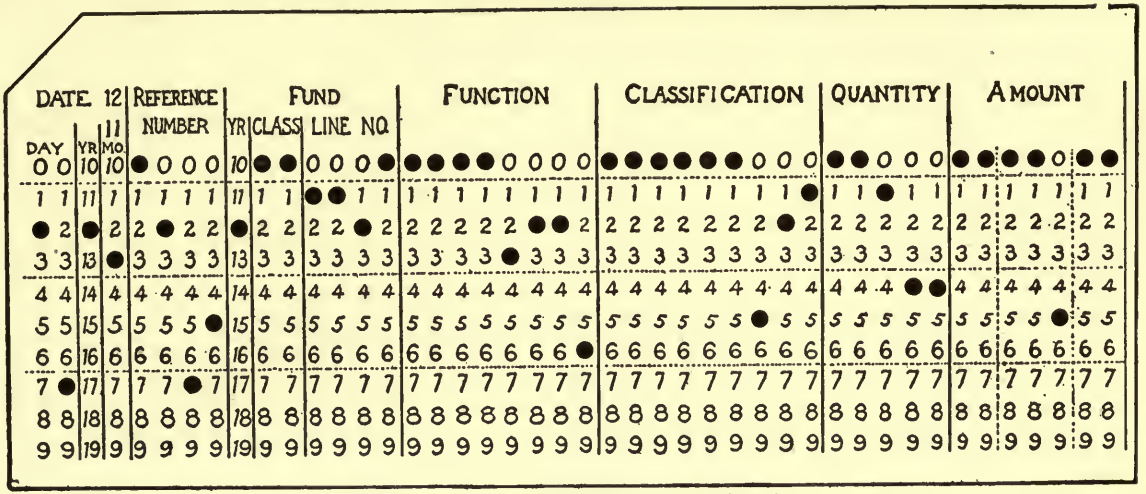
DATE _____

DOLLARS	CENTS

SIGN

CHARGE ACCOUNT No. _____

Form 84. Petty Cash Voucher



Form 85. Machine Punched Card

INDEX

(References are to pages)

A

Accountants, training school for, 25, 26
Accounting (See also "Accounts," "Municipal Accounting," "Bookkeeping")
  associations of, 27
  balance sheets, 252-263
  billing system, 167
  codes, 297-299
  controlling features, 31
  cost, 137-158
  for schools, 282-296
  for small cities, 302-321
  journal, 178-207
  leagues and associations, 27
  ledger, 208-251
  machine methods, 297-301
  purchases, 59-73
  subsidiary ledgers used in, 264-268
  terminology, 25
  uniform methods of, 27
  voucher system, 74-78
Accounting associations, 27
Accounting control, 53
Accounting for small cities, 302-321
  classified journal entries, 303-312
  ledger accounts, 302, 303, 313-321
  requirements, 302
  sinking fund accounts, 303
Accounts (See also "Bookkeeping")
  capital fund, 220-223
  chart of hospital, 127
  controlling, 30-32, 170
  double-entry, 35
  expense, 30, 269
  hospital, 127, 128
  ledger, 208-244
  number classifications, 284
  revenue, 30
  school, 282-296
  sinking fund, 223-226, 243
  special and trust fund, 226-229
  special reserve, 73
  standardization of, 36
  terminology of, 25
  uniform classification of, 23
Accounts receivable, 159-170
  accruals to funds, 169
  assessments, 168
  departmental charges, 169
  licenses and permits, 173, 174
  taxes, 159
Angle rule dating (Exhibit D), 176
Appropriations (See also "Journal Entries")
  ledger (Form 68), 265
  statement of condition of (Form 78), 270
Article index card (Form 2), 61
Assessed valuation (Exhibit J), 325
Assessment rolls, 166
Assessments, 166-168
Assessment valuations
  annual record of, 163
  details of, 163, 164
  how corrected, 165
Auditing
  claims, 56, 74, 75
  monthly report, 31
  voucher basis of, 74

B

Balance sheets, 245-263
  capital fund, 247, 256
  classification of, 245
  consolidated, 250, 251, 260, 261
  current fund, 246, 247, 253-255
  for small cities, 321
  property account, 250, 263
  sinking fund, 248, 249, 257
  special and trust fund, 249, 250, 258, 259
  standard forms of, 26
Bank balances, daily record of (Form 67), 175
Bedsteads, prison-made, 148, 149
Bids
  competitive, 69
  proposal for, 64
  successful, 63
Bid sheet, 64, 65
Billing system, condensed, 167
Board of aldermen, 53
Bonded debt, 42, 43
Bond funds
  authorizations, 55-58
  classification of, 56
  journal entries, 58, 185-187, 200, 201
  ledger (Form 69), 265
  statement of condition of (Form 79), 270
Bond issues, 274, 275, 277
Bond notes, 57
Bonds, 42, 43
  assessment, 58
  classes of, 56
  construction, 57
  purpose of, 56
  revenue, 56, 57
  special revenue, 57
Bookkeeping for cities (See also "Accounting"), 28-32
  compared with business bookkeeping, 29, 30
  double-entry systems, 32
  monthly report, 31
  present status, 29
  primitive nature of, 29
  public requirements, 28
  revenue and expense accounts, 30
  stages of progress, 28, 29
  standards to be met, 31, 32
  systems of, 28, 29
Borrowing, municipal, 274-280
  bond issues, 274, 275
  compared with private, 274
  debt limits, 275
  equitable, 33
  limiting of, 43, 275
  Massachusetts cities, 278
  New York City, 279-281
  power of cities, 43
  revenue bonds, 277
Boston ledger, 107
Bread, prison-made, 115
Bridges, cost of (Exhibit K), 325
Brushes, prison-made, 148
Budget
  allowances, statement of (Form 77), 269
  approval or veto, 52
  charts, 335-337
  comparative allowances (Exhibit G), 335
  estimate of departments for, 46, 118
  estimate of salaries, 46, 47
  exhibitions and publicity, 24
  expansion of, 24
  graphic form of, 158
  journal entries, 179, 195
  ledger accounts, 208, 232, 237
  lump sum, 45
  modifications of, 53
  per capita cost (Exhibit I), 337
  per capita cost statement, 156, 157

Budget—*continued*
power of aldermen, 53
power of mayor, 53
public hearings on, 52
reform of, 24
schedules, 45
segregated, 45
tentative, 52
Budget-making
basal records for, 51
careless methods, 44
charter provisions, 45
charts, 335-338
evil practices, 44
means of control, 44, 53
methods of, 44, 45
official action in, 52-54
overdrafts, 45
restrictions, 82
Budget restrictions, 82
Bureau of Municipal Research, 24

C

Calorie, as measure of food, 104
Capital fund (See "Funds")
Cards, machine record, 297, 301
Central purchasing department, 26, 59
Certifications to pay-rolls, 89, 90
Charities, administration chart, 122, 123
Charts, graphic
accounting system (journalizing), 323, 332, 333
angle rule dating, 176, 331
bridges, operation and maintenance, 325, 339
budget comparative allowances, 323, 335
budget per capita cost, 324, 337
contagious disease hospital, 126, 329
funded debt and assessed valuation, 325, 338
health department organization, 126, 328
light, heat, and power costs, 143, 330
municipal accounting system, 322, 334
nurses in municipal hospitals, 326, 340
patient days, trend in, 326, 341
personal service and number of employees, 324, 336
uses of, 322
Cities
budget reform in, 24
census bureau schedules, 24, 25
statistics of, 24, 25
Civil service regulations, 80, 81
Claimants ledger (Form 71), 266
Claims, miscellaneous, 69
Clinics, 142
Codes, accounting, 297-299
Collections, 171-177
abatements, register of (Form 63), 173
assessments, 172
departmental accruals, 173
deposits, register of (Form 66), 175
forms, 415-420
licenses and permits, 173, 174
personal property tax, 172
poll tax, 172
receipts from bond sales (Form 64), 174
register of (Form 62), 173
statement of balances, 295
tailings, register of (Form 65), 175
tax bills, 171
tax liens, 171
tax receipts, 171
warrants for, 167
water rates, 172
Comptroller, duties of, 46

Condemnation proceedings, register of (Form 10), 72, 73, 92
Consolidated balance sheet, 250, 251, 260-261
Contagious disease hospital organization chart (Exhibit B), 126
Contingencies, 129
Contractors
  delinquent, 66
  requirements for, 65
  sureties for, 66
Contracts, 69
  ledger (Form 70), 266
  register of, 71
  statement of condition of (Form 80), 270
Controlling accounts (See "Accounts")
Corrections, administration chart, 123
Cost accounting, 51
Cost analysis, 155, 156
Costs (See "Municipal Costs")
Cost summary (Form 51), 154
Current funds (See "Funds")
Customers ledger (Form 72), 267

D

Daily time report (Forms 22, 50), 84, 151
Dairy products, 115
Debt limit, 275, 278-281
Deeds, register of (Form 56), 163
Departmental expense ledger (Form 73), 135, 136
Depositors ledger (Form 72), 268
Depreciation, 33, 272
Depreciation reserves, 33, 34
Dewey decimal system, 284-287
Diet
  allowance, 105
  measurement of, 104
  selection of, 104
Dietetist, work of, 102
Distribution sheet of stores (Form 43), 106
Distribution time sheet (Form 23), 84
Docks and ferries, operating chart, 125
Double-entry bookkeeping, 32
Driver's daily report, 152

E

Education (See "School Accounts")
Employees
  classes, 80, 81
  daily time report (Form 22), 83
  distribution time sheet (Form 23), 84
  monthly clock card (Form 21), 83
  pay-rolls, 85-87
  record card (Form 19), 82
  record of clock numbers (Form 20), 82
  timekeeper's record book, 84
Employee's record card (Form 19), 82
Equipment, 114, 129
  budget estimate for, 49, 50
  classification of, 131-133
  ledger (Form 75), 268
  statement of condemned, 114
Expense
  accounts, comparative statement of (Form 77), 269
  definition of terms, 129
Expense analysis, 118-136
  care of public buildings, 124, 125
  charities and corrections, 122, 123
  classification of, 118-125
  docks and ferries, 125

Expense analysis—*continued*
education, 123, 124
functional accounts, 118
general government, 118, 119
health and sanitation, 121, 122
overhead, 153
protection of life and property, 119-121
recreation, 124
Extravagance, municipal, 35

F

Farm products, 115
Ferries (See "Docks")
Financial condition, 177
Financial statements, 294, 295
Fire department, expense analysis of, 120, 121
Fixed charges, 129
classification of, 134
Food (See also "Diet")
allowance to institutions, 103, 104
measured in heat units, 104
Forms—Check and check register
register, appropriations, 379
register, capital fund, 381
register, sinking fund, 382
register, special and trust funds, 383
register, special revenue bond funds, 380
voucher check, 378
Forms—Costs
daily time report, 401
kitchen and dining room, 397
laundry, 398
motor vehicle, 399, 400
per capita statement, 396
register of work sheets, 403
summary, 402
Forms—Disbursements
daily time report, 367
distribution time sheet, 368
employee's record card, 364
monthly clock card, 366
pay-roll analysis, 369
pay-roll, split, 371
pay-roll, straight, 370
pay-rolls recapitulation, 372
record, clock numbers, 365
record, salaries expended, 373
record, wages expended, 374
register of judgments and mandamuses, 375
register of vouchers, 362
register of vouchers, appropriation, 359
register of vouchers, capital fund, 361
register of vouchers, sinking fund, 363
register of vouchers, special and trust funds, 362
register of vouchers, special revenue bond funds, 360
voucher stamp, 358
Forms—Ledger
appropriation, 422
bond fund, 423
claimants, 425
contract, 424
customers, 426
departmental expense, 427
equipment, 429
live stock, 430
property, 428
Forms—Miscellaneous
cash book and journal combined, 438
machine-punched card, 441
pay-roll, master sheet, 439
voucher, petty cash, 440
Forms—Purchases
article index card, 345
purchase order, 349
record of contract orders, 354
record of open market orders, 355

Forms—Purchases—*continued*
register of condemnation proceedings, 353
register of contracts, 350
register of miscellaneous claims, 352
register of open market orders, 351
request for purchase, 346
storekeeper's advice of goods ordered, 348
vendor's index card, 344
vendor's purchase order, 347
Forms—Records and registers
abatements, 416
bank balances, 420
collection, 415
deeds, 409
departmental accruals, 412
deposits, 419
meter reader's card, 410
personal property, 407
real estate, 406
receipts from bond sales, 417
sinking fund accruals, 413
special and trust fund accruals, 414
tailings, 418
tax rolls, 411
valuation history, 408
Forms—Statements
appropriations, condition of, 433
bond funds, condition of, 434
budget allowances and expense accounts, 432
contracts, condition of, 435
inventory of equipment, 436
Forms—Stores
distribution sheet, 392
ledger, 386
register of requisitions, 393
requisitions on storekeeper, 387-391
Funded debt (Exhibit J), 325
Funding relations (See "Funds," "Bonds," and "Bond Funds")
Funds, municipal, 38-43
accounting for, 38
audit of, 38
capital, 40, 247, 256
classification of, 39
creation of restricted, 39
current, 40, 246, 247, 252-255
custodianship of, 38
sinking, 40, 248, 249, 257
special and trust, 40, 41, 249, 250, 258, 259

G

Gas, production costs, 144-146
General purchasing agent, 59
Government, expense analysis of, 118, 119
Graphic charts (See "Charts")

H

Health department
expense analysis, 121
organization chart (Exhibit A), 126, 328
Highways, expense items, 122
Horse day costs, 138
Hosiery, prison-made, 149
Hospitals
accounts, chart of, 127, 128
distribution sheets for, 107
food allowances for, 103, 104
kitchen and dining room service (Form 46), 138
organization chart (Exhibit B), 126
report of stores issued, 113

I

Inspection service, 142
Invoices, 77

J

Job costs, 150
Journal entries—Appropriations
abatement of taxes, 185, 200
accounts receivable collections, 184, 199
appropriations authorized, 179, 195
burden distribution, 183, 198
cash collections, 184, 199
cash paid, 182, 197
contract orders uncleared, 180
contracts reserve, 179, 196
departmental accounts receivable, 184, 198
insurance expiration, 182, 197
judgments and mandamuses payable, 182, 197
miscellaneous claims reserve, 180, 196
miscellaneous collections, 185, 199, 200
open market orders reserve, 180, 196
pay-rolls payable, 181, 197
stores distribution, 183, 198
taxes receivable, 183, 198
vouchers payable, 180, 196
Journal entries—Capital fund
capital surplus, 189
condemnation proceedings, 188, 202
construction bond sales, 188
construction bonds liquidated, 189
construction funds authorized, 187, 202
due to other funds, 189
reserve for awards, 188, 202
sundry accounts, 188
unapplied surplus, 189
Journal entries — Property accounts, 194
Journal entries—Sinking funds
accrued interest, 191, 205
amortization of premiums, 191, 205
budget moneys, 190, 204
closing entry, 192
debt and interest payments, 191, 204
reserve for bonded debt and interest, 189, 204
revenue accruals, 191, 205
sundry accounts, 190
unapplied surplus, 191, 205
Journal entries—Special and trust funds
assessment bonds, 193
bequests and legacies, 194, 207
closing entry, 194
depositors cash, 193, 206
private securities and properties in trust, 194, 206
special and trust funds authorized, 192, 206
special assessment collections, 193, 206
special assessments, 193, 206
sundry special and trust funds, 192
unclaimed salaries and wages, 193, 206
Journal entries—Special revenue bond funds
abatement of expense, 187, 201
bond fund account, 186
bond funds authorized, 186, 200
cash sales, 186, 201
equipment and sundry accounts, 187, 201
final closing, 187, 201
Judgments and mandamuses, 91-92
basis for book entries, 92
nature of charges, 92
procedure followed, 91
Judgments, register of, 91

K

Kitchen and dining room service (Form 46), 138
Knit goods, prison-made, 149

L

Laundries
  costs and production (Form 47), 141
  expense items, 141
  supplies for, 130
Ledger (See also "Subsidiary Ledgers), 30-32
Ledger accounts—Capital fund
  accounts receivable, 221, 234
  available cash surplus, 221, 234, 238
  capital surplus, 223, 235
  cash, 221, 234, 240
  construction and equipment, 220, 234, 242
  construction and equipment reserve, 222, 235
  construction bonds, 222, 235
  construction fund authorization, 221, 234
  construction fund requirements, 234
  contracts reserve, 221, 234, 239
  due to other funds, 222, 235, 243
  judgments payable, 221, 235
  open market orders reserve, 221, 234
  pay-rolls payable, 221, 235
  real estate, 222, 234
  real estate reserve, 223, 235
  reserve for awards, 221, 234
  unapplied surplus, 221, 234, 238
  vouchers payable, 221, 234
Ledger accounts—Current fund
  abatement of expense, 217, 233, 242
  appropriations, 210, 232, 234
  available cash surplus, 210, 232, 238
  budget requirement, 208, 232, 237
  cash, 212, 232, 240
  contracts reserve—appropriations, 211, 232, 239
  contracts reserve—special revenue bond funds, 232
  current surplus, 216, 233, 241
  departmental accounts receivable, 213, 233
  equipment and tools, 219, 234
  expense—cemeteries and crematories, 219, 234
  expense—electric light, 219, 234
  expense—gas, 219, 234
  expense — general government, 218, 233, 242
  expense—water supply, 219, 233
  insurance prepaid, 214, 241
  insurance prepaid reserve, 216, 233, 241
  interest paid, 219, 233
  interest prepaid, 233
  interest received, 218, 233
  judgments and mandamuses, 215, 233
  miscellaneous claims reserve, 212, 232
  open market orders reserve, 211, 232
  pay-rolls payable, 215, 233
  reserve for abatement of taxes, 213, 233, 240
  revenue bonds, 209, 215, 233, 241
  revenue—cemeteries, 218, 233
  revenue—electric light, 218, 233
  revenue—gas, 218, 233
  revenue — general government, 217, 233, 242
  revenue—water, 218, 233
  special revenue bond funds, 232
  stores, 214, 233
  stores reserve, 216, 233

Ledger account—Current fund—*continued*
suspense, 220, 234
taxes receivable, 212, 213, 232, 240
unapplied surplus, 209, 232, 238
vouchers payable, 214, 233, 241
work in process, 219, 234
Ledger accounts—Property
construction, 237
depreciation, 237, 244
equipment, 237, 242
land, 237, 244
local improvements, 237
surplus, 237, 241
work in process, 237
Ledger accounts—Sinking fund
accounts receivable, 225, 235
available cash surplus, 225, 235, 238
cash, 225, 235, 240
interest receivable, 225, 235
investments, 224, 235, 243
premiums on investments, 225, 235
reserve for bonded debt, 224, 235, 243
reserve for interest, 224, 235
sinking fund requirement, 223, 235
sinking fund surplus, 225, 235
unapplied surplus, 225, 235, 238
vouchers payable, 225, 235
Ledger accounts—Special and trust funds
accounts receivable, 226, 236
assessment bonds, 228, 236
available cash surplus, 226, 236, 238
cash, 226, 236, 240
depositors, 236
deposits, 228
due from construction funds, 227, 236, 243
local improvement reserve, 236
local improvements, 228, 236
open market orders reserve, 226, 236
pay-rolls payable, 227, 236
securities and properties in trust reserve, 227, 236, 243
special accounts surplus, 236
special and trust fund authorizations, 227, 236
special and trust fund requirements, 226, 236
unapplied surplus, 226, 236, 238
unclaimed salaries and wages, 228, 236, 244
vouchers payable, 227, 236, 241
Liabilities, 40, 245-263
Licenses and permits
revenue from, 173, 174
stationery for, 177
Liens on real estate, 171
Light, heat, and power, 143, 144

M

Machine records, 297-301
decimal codes, 297-299
punched cards (Form 85), 297
use of, 301
Maintenance, 128
Mandamuses (See "Judgments")
Massachusetts cities, debt limit in, 278
Massachusetts Municipal Accounting Act, 24
Materials, 129, 133
budget estimate for, 49, 50
classification of, 133
Mattresses, prison-made, 148, 149
Measure
apothecaries', 108
broken dozens, 108
decimal equivalents of common fractions, 110
decimal system of, 108

Measure—*continued*
metric system, 108
units of, 108
Meat
cuts of, 112
preparation of, 102
specifications for, 62
Merit system, 80, 81
Meter reader's card (Form 57), 168
Metz Fund, 25
Motor vehicles (Forms 48, 49), 141, 142
Municipal accounting (See also "Accounting")
charts, 332-334
controlling features, 31
efficiency in, 35
for small cities, 302-321
fundamental requirements, 37
genesis of, 23-27
income and expenditure basis of, 33-37
publicity, 36
public requirements, 28
standards required, 31, 32
state laws concerning, 27
tax rate as index, 36
uniform system of, 23, 27
Municipal costs, 137-158
analysis of, 155
bridges (Exhibit K), 325
budget per capita statement, 156
charts, 330, 337, 339
clinics, 142
cost summary (Form 51), 154
departmental estimates, 52
forms, 396-403
gas production, 144, 145
horse day, 138-140
inspection service, 142
jobs, 150
kitchen and dining room service (Form 46), 138
laundry (Form 47), 141
light, heat, and power (Exhibit C), 143
lump sum estimates, 51
motor vehicle (Forms 48, 49), 141
overhead expense, 153
per capita statement (Exhibit I), 156, 157, 324
per capita statement (Form 45), 137
personal service (Exhibit H), 324
register of sheets (Form 52), 154
street cleaning, 140, 141
water department, 146
Municipal funds, 38-43
Municipal government, 37
Municipal ownership, 36, 37
Municipal profits, 34

N

National Municipal League, 23, 27
Net earnings rule, 161
Nurses, in hospitals (Exhibit L), 326

O

Obsolescence, 33
Officials, city
civil service requirements, 81
competitive class, 80
elective, 79, 80
exempt positions, 80
how appointed, 81
labor class, 81
non-competitive class, 80
Open market orders, 69
record of (Form 12), 76
register of (Form 8), 71, 72
Operation and maintenance (See also "Expense Analysis")
distinction between, 128

Operation, cost of, 30
Orders, purchase
contract, 69
open market, 69
vendor's copy of, 69, 70
Overhead expense, 153

P

Patient days, trend in (Exhibit M), 326, 341
Pay-roll analysis (Form 24), 84
Pay-rolls, 79-90
analysis of (Form 24), 84
certifications to, 89
deduction fund, 85
fictitious increase of, 44
forms, 369-372, 439
journal entries, 181, 197
ledger accounts, 215, 221, 227, 233, 235, 236
master sheet (Form 83), 290
nature of, 79
pension fund, 86
recapitulation, certification, 90
recapitulation of (Form 27), 87
record of, 79
split (Form 26), 85
straight (Form 25), 85
system of, 79
Penal institutions, 103
Penitentiary, food allowance to inmates, 104, 105
Pension fund deductions, 85, 86
Pension fund pay-rolls, 86
Per capita costs, 137
Perpetual care funds, 277, 278
Personal property
definition of, 160
exempt from taxation, 165
record (Form 54), 162
Personal property tax, 172
Personal service and number of employees (Exhibit H), 324
Philadelphia, accounting system for, 26, 27
Police department, expense analysis, 119, 120
Poll tax, 172
Poultry, 62
Prison-made articles, 147-149
profits on, 149
Property, exempt from tax, 165
Property ledger (Form 74), 268
Publicity of city affairs, 36
Public school fund, 287, 288
Public utilities, economical management of, 37
Purchase order
manifold (Form 4), 69
office copy (Form 6), 71
provisions of, 70
Purchase records
article index card (Form 2), 61
bid sheet, 64
manifold purchase order (Forms 4-6), 69
non-technical specifications, 62
office copy of purchase order (Form 6), 71
proposal for bids, 64
register of contracts (Form 7), 71
register of miscellaneous claims (Form 9), 72
register of obligations (Form 10), 72
register of open market orders (Form 8), 71
request for purchase (Form 3), 66, 67
standard specifications, 62, 63
storekeeper's advice of goods ordered (Form 5), 70
sureties, 66
technical specifications, 63
Purchasing agent
assistants of, 60

Purchasing agent—*continued*
duties of, 59
tenure of office, 59
Purchasing department, central, 26, 59
management of, 60
organization of, 60

R

Rate table, 86, 87
Real estate
classes of, 160
definition of, 160
record (Form 53), 162
valuation history record (Form 55), 163
Record
of clock numbers (Form 20), 82
of daily bank balances (Form 67), 175
Records (See "Forms")
Register
of abatements (Form 63), 173
of collections (Form 62), 173
of cost sheets (Form 52), 154, 155
of deposits (Form 66), 175
of miscellaneous claims (Form 9), 72
of obligations from condemnation proceedings (Form 10), 72, 73
of receipts from bond sales (Form 64), 174
of tailings (Form 65), 175
Rejected goods, records of, 101
Repair and maintenance, material for, 116
Reports, on condition of appropriations, 54
Requisitions
checking of, 105
for penal institutions, 103
on storekeeper, 101
Reserve accounts, special, 73
Reserves
for depreciation, 33, 34
for obsolescence, 33
Revenue (See also "Accounts Receivable")
statement of balances, 295
Revenue bonds, 277
Rubber blankets, specifications for, 63

S

Salaries, budget form of, 46-48
Salaries expended and unexpended balances (Form 28), 88
Sanitation (See "Health")
School accounts
chart of, 285-287
classification by numbers, 284
collection and revenue balances, 295
combined cash book and journal (Form 82), 290
expenditures, 288-290
financial statements, 294, 295
forms, 438-440
journal entries, 291-294
ledger accounts, 294
payments and appropriation balances, 295
pay-rolls (Forms 83a, b), 290, 291
petty cash voucher (Form 84), 291
revenues, 287, 288
school property, 282-284
statistical records, 296
statistics, uniform, 282
voucher checks (Form 31), 291
School for accountants, 25
School property, 282-284
Self-supporting activities, 276
Service, 129
budget allowance for, 51
by contract or agreement, 50, 133, 134

Service—*continued*
classification of, 134
description of, 51
public and private, 34, 36, 37
Shoes, prison-made, 147
Sinking fund, 41, 78
Sinking fund balance sheet, 248, 249, 257
Sinking fund bonds, 276
Sinking fund vouchers (Form 18), 78
Specifications for supplies, 62, 63
Split pay-roll (Form 26), 85
Spoils system, 36
Stables, expense classification of, 139
Statements, 269-273
budget allowances and expense accounts (Form 77), 269
collections and revenue balances, 295
condition of appropriations (Form 78), 270
condition of bond funds (Form 79), 270
condition of contracts (Form 80), 270
departmental expense, 270
forms, 432-436
inventory of equipment (Form 81), 271, 272
payments and appropriation balances, 295
unit cost of work, 271
Stationery, financial, 175, 176
Statistics
census bureau classifications, 24
of cities, 25
records, 296
Storehouse and stores
accountability for, 116, 117
cleaning supplies and equipment (Form 41), 102
distribution sheet for, 106
division of stock, 97
due book, 106
employees, 97
forms, 386-393
inspection of, 99
inventory, 114
location and arrangement of, 98
memorandum invoices, 99
organization of, 96, 97
pricing stores, 111
purchase orders, 98, 99
receipt vouchers, 106
rejected goods record, 101
requisition register (Form 44), 116
requisitions on, 96
stock clerks, 97
storekeeper, 96
stores ledger (Form 37), 100, 108
units of measure, 108
working desk for, 101
Storekeeper
advice of goods ordered (Form 5), 70
advised as to purchases, 70
receives copy of purchase order, 70
requisitions on (Forms 38-42), 101
voucher stamp, 358
Straight pay-roll (Form 25), 85
Street-cleaning costs, 140
Subsidiary ledgers
appropriation (Form 68), 265
bond fund (Form 69), 265
claimants (Form 71), 266
classification of, 264
contract (Form 70), 266
customers (Form 72), 267
departmental expense (Form 73), 135, 136, 267
depositors (Form 72), 268
equipment (Form 75), 268

Subsidiary ledgers—*continued*
expense, 30
forms, 422-430
live stock (Form 76), 268
property (Form 74), 267
purpose of, 32
Supplies
budget estimate for, 49, 50
classification of, 129-131
Supplies and materials
meats, specifications for, 62
poultry, specifications for, 62
specifications for, 62, 63
standardization of, 61
Supporting schedules
consolidated surplus, 262
current fund surplus, 252
Surplus
consolidated, 251, 262
current fund, 247, 252

T

Tabulated records, 351
Tabulating card, 301
Taxes
abatement of (Form 63), 173
assessment rolls, 164-166
assessments of, 168
assessment valuations, 163, 165
bills, 166
classes of, 159, 160
collections (Form 62), 167, 172
definition of, 159
exemptions from, 165
forms, 415, 416
franchise, 160
journal entries, 183, 185, 198, 200
ledger accounts, 212, 213, 232, 240
maps, 161
personal property, 172
poll tax, 172
property, 159
rate of tax, 35, 164
real estate, 160
receipts, 171
Tax maps, 161
Tax rate, 35
as index of efficiency, 35, 36
how found, 164
inequitable, 35
Teams and carts, budget estimate for, 49
Timekeeper's record book, 84

U

Uniform accounting systems, 23, 27
Unit cost, 154, 271

V

Vendor's index card (Form 1), 60
Vendor's invoice, 99
Voucher records, 74-78
certificates on purchase order, 75, 76
for audit purposes, 74
invoices, 77
record of contract orders (Form 11), 76
record of open market orders (Form 12), 76
register of vouchers (Forms 14-18), 77, 78
stamp (Forms 13a, b), 77

W

Wages
budget form of, 48
estimates of, 48
expended against budget schedules (Form 29), 88
Warrants for collection, 167
Water department, cost accounting, 146
Work orders
classified, 150
manifold orders, 151
time report on (Form 50), 151, 152
Work, unit cost of, 271

UC SOUTHERN REGIONAL LIBRARY FACILITY
A 000 529 221 4